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THREE YEARS OF MILITARY PSYCHIATRY IN THE UNITED KINGDOM

BY

J. R. REES, M.D.

Brigadier; Consulting Psychiatrist to the Army

The remark of Napoleon that "war is three-fourths a matter of morale; physical force only makes up the remaining quarter,"* if applied to modern warfare, might have seemed far-fetched to many of us in 1939. Now, however, we have lived through the day-to-day stresses and rituals of total war; we have watched and felt the successes and the failures of our own Forces and of our Allies; and, having dealt with men and women of all types under strain, none of us can doubt the general truth of this dictum. Probably it would be equally true if we said something similar about civil life in peacetime.

Certainly the sample of ordinary men and women who compose the Army in wartime have presented issues which have challenged psychiatric thought and practice. The Army doctor, perhaps more obviously than the civilian physician, concerns himself primarily with health and efficiency, and only secondarily with what one may call "salvage." The psychiatrist finds that in Army work his contribution to the total war effort is made far more effectively by varying prophylactic procedures than it could possibly be were he solely concerned with diagnosis and therapy. It may therefore be useful to present a general survey of the work of Army psychiatry, setting out its developments and present tendencies. Many excellent reports on clinical matters have been published from Army and E.M.S. hospitals, but no effort has as yet been made to give an inclusive picture of the work that is being undertaken in this country. Clearly, any attempt to do this in the space of an article for the *Journal* will leave out much that should be said, and there will be scope for separate reports on almost every topic when it is possible for these to be produced.

Pre-war Planning

The psychiatric problems of this war have, most fortunately, not presented themselves in the form that we had anticipated. Our pre-war planning, both for the Army and for the civil population, was based fundamentally on our 1914-18 experience, and we conceived that the stresses we knew then would be "hotted up" by incessant, relentless air attack on the civilians and the Army in this country. Reference will be made later to the incidence of acute war neurosis, but this has, in fact, been one of our minor problems.

We had at our disposal before the war the Report of the 1922 War Office Committee on Shell Shock, and the even more valuable Vol. X of the U.S. Army Medical History of the last war. Throughout the 1922 Committee report there is emphasis on the need for better recruitment and better selection of personnel. It stresses also that unstable and neurotic types do badly under any war conditions, and it emphasizes the need for early effective treatment and for medical training in the psychiatric handling of these men. The American Vol. X on Neuropsychiatry provided us with a complete textbook on both the clinical and administrative sides of Army work, and much of the history of our allies contained in that volume has repeated itself in the British Army in this war. There was therefore a considerable amount of material to aid us in making plans before the outbreak of war, and we were faced with one inescapable fact—that after 1918 there were over 100,000 pensioners with overt psychiatric disorders, quite apart from those men who drew pensions for psychosomatic illnesses which were given "organic" diagnoses.

Shortly before the outbreak of war a conference called by the Ministry of Pensions expressed the intention of providing treatment but not giving pensions, save in exceptional cases, to men who broke down with neurotic symptoms. This policy has to a considerable extent materialized, although up to date the moral situation which it was hoped to combat by this decision has hardly arisen, since there has been no epidemic of true war neurosis.

It was clear enough, however, that even before the outbreak of war the prophylactic approach to the problem was by far the more important, and that scientific selection and placing of men would do more than anything else to avoid the development of a large-scale problem. Unfortunately, it was not till much later that adequate measures could be instituted.

Two psychiatric consultants were designated for the Army before the outbreak of war, one for this country and one for the B.E.F. What concerns us in this account is the development of psychiatric work at home. This has been gradual and progressive, keeping pace with the numerical growth of the Army though influenced by the need for developing new techniques to meet changing situations. The Consultant, by himself in the first few months of the war, could do little more than see certain patients, lecture to the staffs of hospitals which were mobilizing and to groups of medical officers in training, make contact with the medical administrative services throughout the country, and begin to lay plans and develop the conviction necessary for them to be carried out.

Early War Measures

Early in 1940 specialists in psychological medicine were appointed to each command in this country. They very quickly found it impossible to get round their large areas, dealing with all the out-patients and with the other problems that they were asked to solve. Gradually more psychiatrists were added, either full specialists with the rank of major or "graded" specialists who had had rather shorter experience in the specialty, so that eventually there came to be in each command from three to ten area psychiatrists whose work was co-ordinated by the command psychiatrist at command headquarters. Their main task has been to provide an out-patient service for every area where there are troops or military hospitals. They visit units to discuss with regimental officers the military value of men who are referred to them, and to advise about a great many of the problems put up by units. They help in the selection procedure (this will be referred to later) and give a good deal of advice and teaching to unit medical officers over the handling of difficult men. More than any other group in Army psychiatry, area psychiatrists have succeeded in getting "inside the Army." They need to under-

* *Correspondance de Napoléon*, **18**, 14276: 1808.

stand something of all the jobs, the training methods, and the intimate lives of soldiers. They have also to be very much *au fait* with all the administrative procedures and the techniques for disposal of the various cases that they meet from day to day.

Alongside the growth of this out-patient service came the growth of in-patient treatment. With the encouragement and help of the Boards of Control—help which has always been given most unstintingly to the Army—military hospitals were opened up for psychotic patients. In 1914-18 many difficult situations arose in which serving soldiers had to be taken to civilian mental hospitals; further, a large number of men in such hospitals were granted pensions which would probably never have been given had it been possible to make a closer investigation of the origin and constitutional nature of their illnesses. A mental hospital which is military as opposed to civilian can detain a patient without any need for certification, and a procedure has grown up in the Army by which officers or other ranks of either sex suffering from a recoverable psychosis can be kept in a military mental hospital before discharge for three or six or, in exceptional cases, nine months. This has the great advantage of allowing for effective treatment to be carried out while there can be thorough investigation of questions of attributability. The policy of the Army in this matter seems to have justified itself.

Most of the hospital treatment of psychoneurotic disorders has been provided by the special neurosis centres of the Emergency Medical Service, which have co-operated well with the Army. Inevitably, however, there had to be special wards in military hospitals. At first these functioned largely as observation wards or collecting centres, and gradually there have been developed special Army hospitals for neurotic disorders, which have the advantage over the E.M.S. hospitals of being military in their organization and atmosphere.

After the first eighteen months of the war it was becoming increasingly obvious that administrative procedures were fully as important as clinical or purely professional questions in Army psychiatry, and eventually early in 1942 a Directorate of Army Psychiatry was set up as part of the Army Medical Services, with a senior Regular R.A.M.C. officer as Director and three psychiatrists working with him. The Directorate is responsible for the development and control of the psychiatric services in this country and with the Over-seas Forces, and for the ever-increasing number of questions which are brought up for psychiatric help or opinion.

The Consulting Psychiatrist works with the Directorate, but is now freer to get round to commands and to undertake the various exploratory and co-ordinating jobs which come his way. He, like the other consultants to the Army, is an adviser to the Director-General, who has very wisely given his consultants much freedom of action.

Psychiatric Problems of the Army

The problems that have faced the Army have, from a psychiatric angle, been numerous. If continuous military action had been nearer to this country the problems might have appeared different, though they would fundamentally have been the same. Some may be puzzled as to why the Army should contain such a large proportion of men who have psychiatric problems; but the reason for this is not difficult to explain. Partly, there has existed for very many years a tradition that men who were immature or unsatisfactory, or whose social records were not above suspicion, could under Army discipline be made into "men." The Army in peacetime has always had a good many backward otherwise unemployable men, and in the majority of cases in the past they have turned out pretty well. Modern war, unfortunately, demands a different quality of man. A more important reason, however, for the accumulation within the Army of men whose mental background is questionable is that the man-power situation of this country has been so arranged that very large numbers of intelligent and able men are reserved in industry. The Royal Navy and the Royal Air Force have a priority of choice; and the Civil Defence Services have claimed a great many men. The Army comes last in the list, and consequently a large proportion of what has been called "the psychopathic tenth" of the country's man-power finds its way into the Army if the mesh of the recruiting boards is too wide. The Army has therefore to deal with very considerable numbers of dull, neurotic, and unstable men who have got on reasonably well in civil life, whenever employment was plentiful: thrust into the stresses of Army life, they become difficult in various ways. These no doubt are the men who, when times are hard, become a problem to the National Health Insurance scheme and to the Ministry of Labour; and very many in the same group would after the last war have found themselves on the books of the Ministry of Pensions. One of our aims has been to avoid repetition of the pension situation which arose after 1918.

Recruitment

It is possible that there has been insufficient understanding and inadequate co-operation between the medical officers who have given so much good service on the recruiting boards and medical officers in the Army. At times there has certainly been a feeling in the minds of some of the medical officers in the Ministry of National Service that the Army's standards were too high and that in consequence too many of the men they had passed in were being boarded out and sent back to civilian life: and here we are concerned, of course, only with the cases in which there is some psychiatric disability. It is perhaps more important, however, to record the great difficulty in recognizing and assessing the neurotic constitution and the intellectual status of men in the short time that they are before the boards, even for board members with a specialist training, and still more for those who have not had special experience. The introduction of intelligence testing at the time when men are called up for their medical board examinations appears to have been of help to the boards in the detection of some of the men whose dullness was hidden by a good façade. Better liaison between the boards, private doctors, and the School Medical Service would probably have been valuable. On the whole the neurotic man, more than his defective fellow, tends to give a reasonably truthful account of himself and his disabilities to a doctor. There is, of course, the obvious difficulty that such a man, fearing military service, may exaggerate or even make quite untruthful statements about himself in order to prevent his calling up. The other danger is that men wishing to join up may give too rosy a picture of themselves, and later on, finding themselves in difficulty, may then take the opposite line and "tell the tale" in order to get out of the Army. These are universal tendencies that nothing is likely to eradicate. If we had no shortage of man-power it would clearly be better rigidly to exclude any men who were not cheerfully prepared to give their services; in this country, however, we have never been in that happy position. Only improved understanding and better investigation can meet the problem of decision about the less willing and the relatively rare instances of the unwilling soldier. It is certain that, in recruiting, a penal attitude, such as occasionally has emerged in the statement that "no one must be allowed to get away with it," is not likely to produce the Army we should all like to see.

At the present juncture it is inadvisable to give exact figures or percentages of the psychiatric disabilities, apart from the classified figures which have already been published of limited groups in hospitals in this country. It is permissible, however, to say that the invaliding or discharge from the Army from all psychiatric causes has been approximately one-third of the total invaliding, a figure which is comparable to the incidence of psychiatric illness in civil life in this and other countries.

Intellectual Defect

There are many fallacies which creep into the assessment of defect by intelligence testing, and the estimation of mental age is by no means a straightforward matter save in the hands of very skilled workers. Broadly speaking, it has turned out during this war that few men whose mental age is below 10½ are fit for Army life except in special unarmed labour sections. It would be folly to attempt the placing or rejection of men simply on the basis of an intelligence test, whatever the safeguards; and, in fact, no one in the Army ever has been recommended for discharge solely for this reason. Investigation of the social and employment histories of all men is essential, and a general psychiatric assessment is made in each case. In the modern Army there are far fewer simple routine jobs than there were in the old Army with its "horse lines" and its slower tempo. There still are plenty of vacancies for the not-so-bright man in the modern mechanized Army if he is properly placed; but

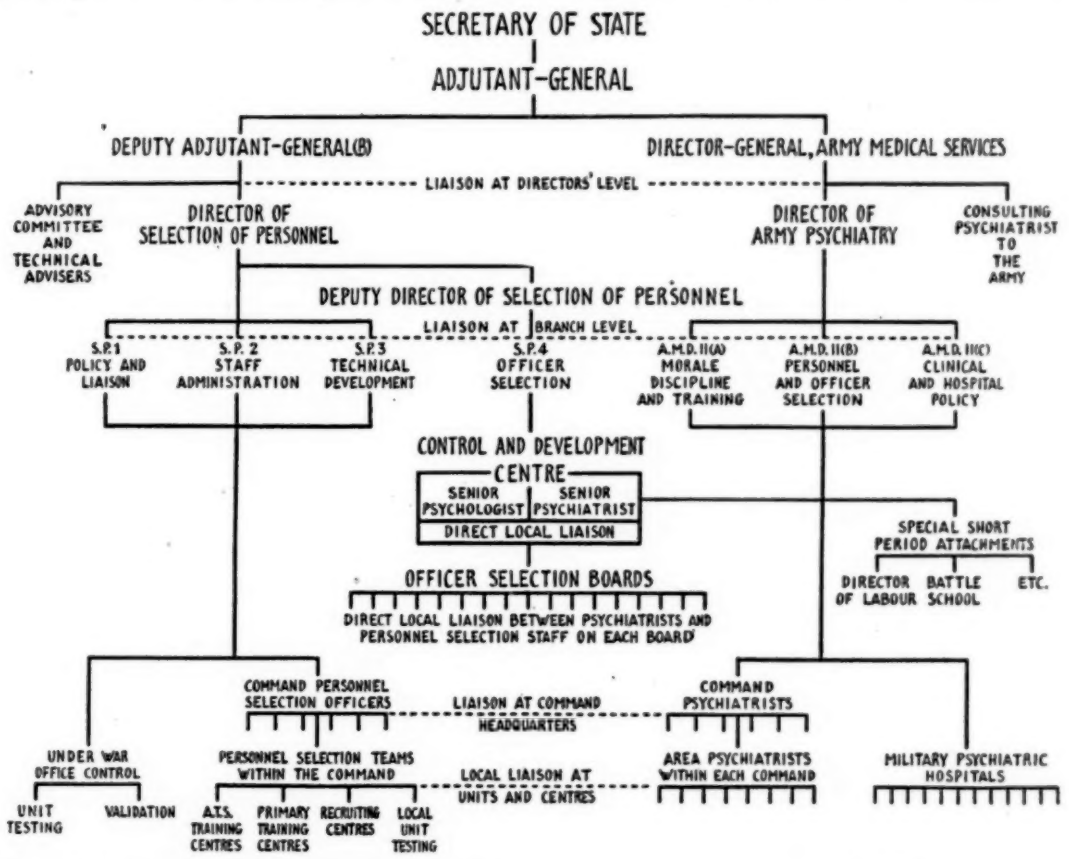
unless he is recognized and fitted to an appropriate role he is likely to become a consumer of man-power rather than a strength to the Army. The dull man is a drag on training and rarely becomes efficient in any technical task. He feels himself out of things and hence inferior; he gets anxious and breaks down far more easily than a man of normal intelligence, and, through difficulty in morale-development and failure to understand regulations and the reasons for them, he is extremely liable to Army crime. The United States Army demonstrated in the last war that the worst soldiers were often the best diggers, a fact once more convincingly demonstrated in the British Army in this war.

Whatever the exact incidence in the ordinary population of the country of those groups who have a low capacity to learn—the dull and backward, the feeble-minded, the imbeciles, or idiots whom Prof. Burt in one inquiry totalled at 25.1% of the population—it is clear that they are numerous. The men with the greatest degrees of defect are for the most part recognized and excluded from the Service by recruiting boards. There remain, however, some 8 or 10% of the whole Army intake who need special consideration in their employment; approximately 2% of these are men who, after a short trial period in the Service, may well turn out to be impossible of employment in any combatant or operational role. The dullards, with whom the Army has had so much concern, might many of them well be called "one-job" men. They have very often found niches for themselves in civil life where they have been able to give first-class service on one particular routine job. If a similar or an equally appropriate niche can be found for them within the Army, then their work can be of great value to the war effort. Experience has shown that where they go unrecognized and are put in units of ordinary men they quickly begin to present problems.

The employment of those men who have a very low capacity to learn but who can be expected to remain emotionally stable in unarmed labour sections has been notably successful. Without this provision the majority of them would have been lost to the Army, and some would have been unemployable in civilian life even in the present time of labour shortage. In these special groups, with wise officers and N.C.O.s, they give splendid service in a variety of occupations, relieving more intelligent men for other tasks and in many cases doing the jobs very much better than they are normally done by the more intelligent type of individual. These men are proud to be in the Army, and they are happy because they have found friends on their own level. Disciplinary troubles are almost entirely absent, and these units provide a striking indication of what can be done in the way of employment of a group in society which in pre-war years had certainly been a problem from many angles.

The women with an equally low capacity to learn seem on the whole to be rather more stable and to be less inclined to break down; but they too present a problem in Service employment, and, in fact, for some time past those who on preliminary intelligence tests fell into the lowest 10% of the population were not taken for service in the A.T.S.

Illiteracy by itself does not prove a bar to military service, though clearly so long as it persists it would exclude men from many units in which they might find themselves in a responsible position that demanded literacy. Approximately 50% of the illiterates are intellectually defective, while the other 50% come from specialized groups such as barge-workers and gipsies.



Selection

After the failure of a pre-war attempt (March, 1939) to get selection-testing introduced into the Army, it was clear that the psychiatrists would have to begin weeding out unsuitable men, and in the first year of the war a good many were transferred to labouring jobs, though after Dunkirk this was stopped for a time. After much discussion it was decided to start special groups for men who were not fit to bear arms, and consequently the number of those who have to be discharged from the Army on grounds of intellectual defect has fallen as the facilities for their employment within the Army's structure have improved. In 1940 the psychiatrists who were then at work in the Army began to employ such familiar methods of testing as the modified Binet–Simon test and the Herring revision. Kent's oral norms, Koh's blocks, and a number of other tests were brought into use, and the Penrose–Raven matrices were employed on an experimental basis. The matrix test proved to be particularly valuable, being a non-verbal method. In 1940, with Dr. Raven's help, it was introduced as a group intelligence test at one of the R.A.M.C. depots, and its careful

standardization and validation was begun. As a group test it proved to be extremely useful. It was possible to squad men for training according to intelligence, and the lower group on the intelligence scale were very properly referred for psychiatric interview, as also were those who made unreliable scores, often for some reason connected with instability. A little later on, through the Director of Military Training and the Army Education Corps, a series of verbal tests was introduced under the guidance of Mr. Farmer of the Cambridge Psychological Laboratory; these were widely employed, and when properly used proved valuable. In June, 1941, after much preliminary work, a Directorate for the Selection of Personnel was set up under the Adjutant-General, and its work, guided by industrial psychologists of experience, has accomplished a great deal for the efficiency of the Army and for safeguarding mental health. The matrix test was introduced at all recruiting boards. Large groups of men whose work in the Army was being changed were put through group tests and given a percentile rating in relation to the whole population. Recently, since conviction of the value of this work had grown sufficiently, the administrative difficulties were overcome and the General Service selection procedure was introduced into the Army at the beginning of July, 1942. All men are now taken into the General Service Corps, where alongside their basic training they are put through a battery of intelligence and aptitude tests, interviewed by specially trained officers, and posted to the most appropriate possible duties in the Army.

The Directorate for Selection of Personnel had undertaken a complete job-analysis of the multitudinous tasks in the different arms of the Service, and as a result was able to lay down the standards of intelligence and other aptitudes necessary for each job, thus providing a basis for the correct posting of men in certain proportions to each type of unit. The accomplishment of this work produced a revolutionary change in the Army's utilization of man-power and has set a standard which will certainly be applied in industry and in social life in the post-war world. The matching of men to suitable work is as valuable a means of psychiatric prophylaxis as anything that could well be devised.

In this mass selection of men psychiatry is perhaps the handmaid of industrial psychology, whereas in other fields—e.g., officer selection and with other groups in which temperamental factors must be assessed—psychology is the handmaid of psychiatry. In fact, in the Army the psychologists and the psychiatrists work together as a team in the best possible way, and their interdependence is fully demonstrated. The accompanying diagram showing the lay-out will be of some interest. In dealing with large groups of men who are put through the General Service selection procedure, in which a battery of intelligence and aptitude tests are employed, the psychiatrist sees all those men who are low scorers, and in addition all whom the trained personnel selection officers regard as unreliable or puzzling, whatever their intelligence. In this way many of the potential psychiatric problems are brought to light at the very beginning of Army life, and it is possible to ensure the wisest employment of these men within the Army machine.

Table showing Details of Disposal Recommended by Area Psychiatrists for All Cases Examined as Out-patients during the Six Months preceding April 30, 1942

Recommendations	Referred through Personnel Selection	Referred through Unit Medical Officers				
		Neurosis and Psy. Pers.	Dullness and Defect	Psychosis	Other Diagnosis	Total
Return to unit: no action ..	14,174	1,844	2,127	9	1,485	19,839
Observation in unit	1,040	1,701	48	21	374	3,184
Out-patient treatment	883	375	9	6	52	1,325
E.M.S. neurosis centres ..	68	3,291	28	59	108	3,554
Army neurosis centres ..	16	1,502	7	27	19	1,571
Army mental hospitals ..	47	529	6	742	81	1,405
Other hospitals ..	28	350	5	58	270	711
Reduced category	213	1,788	81	17	106	2,205
Pioneer Corps, including unarmed sections ..	12,504	563	3,365	8	83	16,523
Other corps ..	3,832	786	853	1	208	5,680
Other disposals ..	1,579	1,123	401	46	811	3,960
Discharge ..	1,180	3,786	1,108	114	260	6,448
Total ..	35,764	17,638	8,038	1,108	3,857	66,405

The figures set out in the accompanying Table, of work done by area psychiatrists in the period just before the introduction of the General Service scheme, give an idea of the types of disposal recommended or advice given in these psychiatric interviews. A detailed discussion of these figures will be the subject of a further paper.

Psychosis

Reference has already been made to the organization of special mental hospitals within the Army. There are ten of these. For the most part they are in separate blocks of civilian mental hospitals, taken over by the Army and renamed. The superintendent of the mental hospital and his deputy are given honorary rank for disciplinary purposes, and the superintendent is O.C. the military hospital. The number of beds in these units varies from 74 to 400. Medical staffing is, so far as possible, on the basis of one Army psychiatrist to 50 patients. Fortunately these beds have never been completely filled, although certain units have worked under great pressure with a very big turn-over. The incidence of psychosis has been less than was anticipated, and constitutes a small though important part of the psychiatric work of the Army. The R.A.F., our various allies, and the prisoners of war have to be accommodated, and one hospital is entirely devoted to officers and other ranks of the Women's Services. The average duration of stay in hospital for psychotic cases is about 75 days, and the results obtained by active treatment—continuous narcosis, shock therapy, insulin, P.T., and occupational therapy—are good. As in the Middle East, there seems at home to be some evidence that psychotic breakdown in the Services clears up rather more quickly and satisfactorily than in the equivalent age groups in civilian life. Some 95% of the psychotic patients in military mental hospitals are returned to the care of relatives as recovered or to public assistance institutions, while the remaining 5% are discharged to civilian mental hospitals. In this way it is clear that one purpose of these hospitals has been realized and that the civilian mental hospitals have been saved an additional burden. A follow-up scheme is at present being devised so that we may learn the after-histories of these patients in so far as further breakdown is concerned. Three of these hospitals are staffed entirely by mental nursing orderlies (male). There has been some difficulty in getting for this type of work enough nursing sisters of the Q.A.I.M.N.S. with a double qualification.

A new classification of mental disorders is now about to be adopted by the Army after much deliberation, and it should help in clarification of statistical returns when these come to be made at the end of the war.

Neurosis

The "psychopathic tenth" of the population, who, as was said above, so largely find their way into the Army, provide us with a very considerable number of men and women who are constitutionally predisposed to neurosis and whose histories reveal evidence of chronic neurotic tendencies from childhood. In active warfare some of these men might have carried on and given good service, as some such men no doubt did in the last war. The inaction and relative monotony that have been forced on so many units of the Army in this country have tended to bring out neurotic tendencies which already existed, and much of our work in Army psychiatry has been concerned with such cases. Only a small proportion of these men are likely to benefit by hospital or out-patient treatment sufficiently to warrant their being kept in the Army. In civilian life they were able to carry on in their own particular niches, going to the doctor when they felt it necessary. The very fact of giving up their individuality and becoming cogs on a large wheel appears to weaken resistance to their own emotional difficulties. Separation anxieties affect most men in the Army to some extent; while boredom, which is at times almost inevitable, produces an immediate increase in sickness rates, neuroses, and disciplinary troubles, which are, indeed, indices of bad personal and group morale.

The special neurosis centres of the E.M.S. and the hospitals devoted to these cases in the Army have all of them found that one of the main difficulties centred round the problem of

individual morale. It has recently been decided to attempt a rough classification of these men according to the probability of their return to the Army, and to devote particular hospitals to them, while those who are more likely to need rehabilitation and discharge to civil life go to other hospitals. The constitutional neurotic certainly reacts badly to the close proximity of a medical board with a steady trickle of discharged men leaving the hospital in metaphorical bowler hats.

A good deal has been written, particularly from E.M.S. hospitals, about the clinical work with these cases, but little that is new has emerged save a modified insulin treatment which helps on the physical side, and some experimental work in occupation which seems likely to prove valuable in wartime. In a hospital for neurotics the ordinary methods of occupational therapy are less appropriate than military occupations. There are Army physical training instructors in each of these hospitals, including the E.M.S., and military training with various modifications is being used with considerable advantage in certain of them. The principle behind this is that to learn to strip a Bren gun properly may be more valuable than to learn carpentry or rug-making, since it is obvious that a patient who recovers is in a stronger position if he can go back to his unit direct from hospital as a fit man who has had further military training than if he needed a convalescent depot for hardening before his return to duty. Whenever it has been possible, spare-time occupations that have some relation to the war effort have been tried, such as making toys for children in day nurseries and the use of simple machines which assist in such work as is admissible in a hospital under the Geneva Convention.

So far as concerns the men who return to duty in the Army, there is a follow-up system which makes periodic inquiry regarding the men's military efficiency and their fitness, and the figures thus provided form some guide to the accuracy of the clinical judgments made in the various hospitals.

Unfortunately as yet there is no means of following up the progress of those men who have been discharged and gone back to civilian life. Despite all the difficulties in the way, after visiting the various hospitals one is always left with the impression that something of value is done even for this group of men who cannot fit into the Army, and that in consequence they may, as a socio-medical group, be rather less of a problem in the future.

An extremely useful experiment in the placing of men occupationally has been carried out for the past eighteen months. Those patients who after treatment in hospital are considered unfit to go back to the units from which they came, but who in the opinion of the doctors have a good chance (75%) of giving efficient service to the Army in some special trade or in some special job which is in line with their pre-war interests or abilities, can be appropriately posted. Each of the neurosis centres and special Army hospitals has direct access to the War Office about these men, and the follow-up inquiry carried out by the administrative branch concerned shows that only 9% of the men so dealt with have turned out failures, while over 70% have been very successful. This figure deserves, and is to have, a more careful check made in the near future. This large-scale individual employment agency is certainly providing a very valuable method of rehabilitation as well as maintaining the man-power of the Army.

As would be expected, the tale of the acute war neuroses resulting from enemy action is very much more cheerful. Since a large number of these men have a good constitution and good medical records the results have been very satisfactory wherever treatment has been undertaken early. Men from Norway and Dunkirk who broke down as a result of prolonged stress have for the most part been got back to duty satisfactorily, many of them to full combatant status. It is a matter for much regret that many men were invalided back either with wounds or with physical diagnoses, and consequently in general hospitals their anxiety tended to go unrecognized, with the result that no specific treatment was provided until the condition had become almost ineradicable. The physical and psychological methods employed, which have proved necessary and valuable in this country, have been fully described in the medical press. In the Middle East Forces the results of treatment seem to have been still better, as one hoped.

Education

The first psychiatrists selected for work in the Army were chosen partly on the grounds that they were experienced teachers who could when necessary give formal instruction and could more often teach without any special appearance of so doing. A satisfactory proportion of the large number of men and women psychiatrists who have later been appointed have shown themselves well able to carry out the same important functions.

The numerous contacts of Army psychiatrists give them day-to-day opportunities of discussing with regimental, legal, and administrative officers problems of morale, discipline, training, "man management," and other topics bearing on mental health. A great number of formal lectures have been delivered to small and large groups in Divisions, Army Schools, H.Q. Conferences, etc. Lectures on psychiatric work in the Army are given to M.O.s in the depots when they are beginning their Army career and on various other occasions later on. Some short systematic groups of lectures have been given and regular tuition has been provided at some E.M.S. and Army hospitals. Further attempts are being made to keep every M.O. of the Field Force *au fait* with the latest methods of dealing with true battle neuroses.

The shortage of medical man-power emphasizes in every branch of the profession the need for specialist training, and in none more than in psychiatry. At one of the Army's special hospitals for neurosis the sixth course (now of three months' duration) is just being completed. Courses of this length cannot produce specialists; but they can widen a previous experience in psychiatry, and they can make a well-balanced M.O. of good general experience a better Army doctor or even start him on a most useful career as a "psychiatric assistant" so that he may ultimately become a specialist. All Army psychiatric hospitals at home and abroad are approved for resident experience for the D.P.M.

Every type of psychiatric experience and approach is of value in the Army once it has been broadened or deepened where necessary and the essential military orientation has been developed.

Medico-Legal Work

It is most satisfactory that the relationship between psychiatrists and the Judge Advocate-General's Department is increasingly one of understanding and co-operation. Medicine and the Law have often been at cross-purposes, and such a situation would be disastrous in the Army. Military crimes are easy to commit, and especially is this so for the dullards and the neurotics. We have aimed at avoiding conflicts of opinion, waste of psychiatric time through appearance at courts martial, and the undertaking of legal procedures in psychiatric cases, where no good purpose was likely to be served either for the group or for the guilty individual.

Much discussion has resulted in an agreed pro-forma (here reproduced) for use by the psychiatrist in reporting. This is

FORM OF REPORT BY PSYCHIATRISTS IN DISCIPLINARY CASES

This report is intended as a guide for the Commanding Officer in considering disciplinary action where the question of the accused's fitness to plead, sanity, and responsibility has been raised. Where in the opinion of the psychiatrist a man is clearly fit to plead and clearly responsible for his actions at material times, a brief report to this effect may replace parts B and C of this report. If the accused is remanded for court martial this report must accompany the application for court martial. The Convening Officer should submit the papers including this report to an officer of the Judge Advocate-General's Branch before ordering trial.

To: *C.O.*

Man's number. Surname. Initials. Rank. Age. Service.

A. The above-mentioned, who is charged with ....., has been referred for psychiatric examination.
He complains that:
He states that:
On examination I noted that:
In my opinion he is suffering from (Official nomenclature)
i.e. (Translation into everyday language)
(When answering in detail questions in B, C, D, and E below, a clear distinction should be drawn between (i) facts observed by the officer making the report: (ii) statements made by the man himself: and (iii) alleged facts communicated by others.)

B. *Unfitness to Plead due to Insanity.*
(i) Is he able to understand the nature of the proceedings at a court martial?
(ii) Is he able to object to any member of the court?
(iii) Is he able to instruct his defending officer?
(iv) Is he able to understand the details of evidence?

C. *Criminal Responsibility.*
(i) Was he at the time of the alleged offence suffering from a defect of reason from disease of the mind?
(ii) Did such defect of reason prevent him from knowing the nature and quality of the act he was doing?
(iii) Or, if he did know, did he know that what he was doing was wrong?

D. *Evidence as to Character.*
(i) Was the accused suffering at the time of the offence from any illness which might have affected his behaviour?
(ii) Is punishment likely to diminish the chances that he will repeat this or similar offences?
(iii) Is punishment likely to increase or diminish his efficiency as a soldier?

E. *Medical Disposal.*
(i) Is any treatment required immediately, during detention, or after release?
(ii) Is any other action (e.g., transfer after sentence) recommended?
(iii) Any other relevant information:

sent to the convening officer, whose responsibility it is to decide whether a court martial shall be held. The psychiatrist is thus in every case playing his proper part as expert for the Crown—briefed neither by prosecution nor by defence. This scheme works well. The J.A.G.s often attend and take part in psychiatric meetings in commands. The close contact thus established makes it possible to discuss difficult cases, to the benefit of both professions.

Arrangements exist whereby dull men in need of psychiatric care or disposal after the court martial are notified, and the detention-barrack problems are thereby eased.

Social Psychiatry

Very largely because of the excellent and close co-operation with industrial psychologists it has been possible to achieve a number of advances in social medicine and prophylaxis in the Army. The efficiency of the Army for the primary purpose of winning the war is the concern of everyone, and from this angle prophylactic measures are infinitely more important than the provision of treatment, valuable and interesting as that is. If any demonstration were needed that the neurotic tendencies of men can be best controlled when they are doing suitable work, that proof has certainly been provided by the scheme for misfits mentioned above. The personnel-selection work of the Army is a major contribution to its mental and physical health as well as to its fighting efficiency and out of the present General Service procedure it seems probable that there will develop a method for use in industrial selection in the future and for the sorting of any large groups of men or women.

Army psychiatry took the initiative in investigating and applying tests for personality and character studies. From this work has developed the specialized technique of the War Office Selection Boards for choosing officer candidates. Here selection is made after two days of observation by a team reminiscent of a child guidance clinic! The team consists of the president and military testing officers (regimental soldiers), psychologists, and psychiatrists. It is not surprising that the character assessment made as a result of the psychiatric interview is in many cases the most valuable of all the various opinions which are presented to the final board before its verdict is given. At present these boards are aiming to discover certain qualities which are particularly necessary for a good officer in different arms of the Army. Follow-up work has been undertaken, and this it is hoped will be carried on right through the Army service of each of these men. It seems as though there had been established a valuable principle for the selection of specialists for various professions and occupations, though for each particular group special techniques will have to be scientifically designed. There has been, and will still be in the future, much resistance to be overcome before the principle of selection by scientific procedure is accepted. Selection pays, but it also carries a threat; for the more accurate it becomes the more it explodes the pleasant and universal fantasy that each of us has a Field-Marshal's baton in his knapsack.

War aims are necessary for us all, and psychiatry has certainly some visions of what can be brought about after the war and where it can slowly but surely make a very considerable contribution to the national life.

Psychiatrists in the Army have not been content to stop short either at clinical psychiatry or at selection, and fortunately they have increasingly been asked to give help and advice with a large number of other problems, such as the multitudinous aspects of morale. In nearly all of these problems there is some way in which the psychiatrist, thinking in terms of the emotional life, can give useful help; later he has the satisfaction of realizing that once his plan has been grasped and carried out it is regarded as "just common sense." In military training there are many problems which concern the industrial and educational psychologist and many in which the psychiatrist also can assist. Accustoming or "inoculation" of men to those battle stresses that menace morale has been one main way in which psychiatrists have helped. To give guidance on questions of the stirring up and effects of hate, on "debunking" battle noise, the tank, and the morale-destroying aspects of the dive-bomber and other alarming techniques of war, makes a very sure contribution to the mental stability and the battleworthiness of men under training. In these and many other ways psychiatry is concerning itself with the task of the Army just as it is concerned with the health of individuals and groups through wiser disposal and posting and through its experiments with the constitutional neurotic and the dullard.

From all these lines of work there open up further possibilities for help to the Army during this war and to the community after it.

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OBSERVATIONS ON INJURIES TO THE SEMILUNAR CARTILAGES IN SERVICE PATIENTS*

BY

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The object of this paper is to analyse the facts obtained as a result of treating injuries to the semilunar cartilage and to see whether any useful information can be drawn from them. The observations are the results of the combined work of the staff of the Harlow Wood Orthopaedic Hospital.

From the beginning of the war until April, 1942, there were admitted and discharged from the hospital 185 patients suffering from injuries in the region of the knee-joint (excluding wounds and fractures). These were diagnosed as follows:

Synovitis	9	Loose bodies	3
Strain (various types)	16	Dislocation of patella	3
Pre-patellar bursitis	1	Osteo-arthritis	7
Semimembranosus bursitis	2	Post-operative cases (I.D.K.)	8
Subsartorial bursitis	1	Injuries to semilunar cartilages	135

In times of peace some men, as a result of athletic activities, injure their knee-joints, and, unless they are professionals, give up the game in which they have been injured and may be able to carry on without very serious disability. It is probable, therefore, that only a small proportion of these cases are ever seen by surgeons and have surgical treatment. In wartime, however, those who are unfit to do what is required of them in the Services must necessarily report sick, and sooner or later they are referred to an orthopaedic centre for advice and treatment. It may therefore well be that the incidence of the various lesions in injured cartilages in Service practice differs widely from that in civilian life.

An inquiry into the position in wartime has been made possible by the establishment of these special orthopaedic centres, in which relatively large numbers of certain types of case, including injuries to the knee-joint, have been segregated. With uniformity of hospital records and notes which this segregation makes possible, it is easier to analyse cases than

* Read at the autumn meeting of the British Orthopaedic Association at Nottingham, September, 1942.

it would be in peacetime, when notes covering many years, written by different individuals, have to be examined.

The number of cartilage cases here reviewed is relatively large, as all have been seen in a comparatively short period. Many are still fresh in our minds, and can therefore be compared and analysed with reasonable accuracy. The cases actually treated by operation numbered 131, and 136 cartilages were removed. The types of lesion found were as follows:

Internal Cartilages	.. ..	99	
Bucket-handle	.. ..	38	
Posterior tear	.. ..	28	
Anterior tear	.. ..	11	
Intermediate	.. ..	15	
Hypermobile	.. ..	6	
Cysts		1	
External Cartilages	.. ..	31	
Bucket-handle	.. ..	5	
Posterior tear	.. ..	5	
Anterior tear	.. ..	8	
Intermediate	.. ..	4	
Cysts	..	7	
Disks	..	2	

No demonstrable lesion, 6 (3 internal, 3 external)

It is interesting to note that the internal cartilages were to the external as 3 is to 1, and that there was one cyst in an internal cartilage and in external cartilages there were seven. These figures roughly correspond to those expected in civil practice, although the number of external cartilage lesions is much higher than was formerly thought to be the case. In only four instances were two cartilages removed from the same knee-joint, and in only two of these were two lesions found: the one point of interest here is the comparative rarity.

Eight patients had had operative treatment elsewhere and were brought into hospital because they had not subsequently made good progress. In six of these the main disability was due to quadriceps insufficiency.

Diagnosis

The first essential is an accurate history, the chief points of which should be the type of injury, the immediate effect of the injury, the length of time taken in recovery and, if this is complete, the number of recurrences, and finally the sensation of the patient regarding the stability or otherwise of his knee.

The second essential is an accurate clinical examination. Here the facts to note are the points of tenderness, the existence of a click which may be elicited at different positions in the range of movement of the knee-joint, the presence or otherwise of locking, and pain at the extremes of movement. The diagnosis depends, therefore, on a combination of the clinical findings and the history, and a negative radiograph. Some patients come with their diagnosis ready-made; they give a definite history of locking, but it is sometimes not easy to realize that their ideas of locking and ours are totally different.

Using these methods, in 6 out of 136 cartilage operations no demonstrable lesion was found. Why was this so? In most cases the history was definite but the clinical findings indefinite. In one case an effusion prevented an adequate examination. In another, arthritic changes were present in the joint. In practically all instances the diagnosis might have been cleared up by a period of intensive and controlled physiotherapy. In doubtful cases we therefore now subject the knee to intensive work so that its reaction may be noted. Six cartilages were thought to be hypermobile at the time of operation. In all of these cases the diagnosis and clinical examination seemed quite definite, and we consider that a mobile cartilage should be recognized as a clinical entity. These patients made normal progress after the cartilages had been removed, and those treated to a conclusion at the rehabilitation centre were quite satisfactory. All were internal cartilages.

In the first part of the period under review we were not able to treat cases to a conclusion. The patients left the hospital after three or four weeks and were lost to us. Our experience with cases from other areas made us feel that possibly our own, too, might not be making the progress we expected. We felt very dissatisfied with the position, and because of this we decided to establish for ourselves a rehabilitation centre at our Lound Hall Annexe. When this was established, patients, instead of being sent away with instructions about post-operative treatment, went to the rehabilitation centre and remained there until their treatment was completed. This centre is able to take 50 patients. The staff consists of an Army P.T. instructor and a fully trained masseuse, and visits are made at regular intervals by a member of the surgical staff of Harlow Wood Hospital. The cases can therefore be divided into two series: the first consists of those treated before the rehabilitation centre was opened, the second series comprises those treated after it had been opened. (In discussing the results of treatment only those in the second series will be referred to.)

Treatment

There are certain points in the operative treatment which we consider important: (1) A small incision about 1½ in. into the joint. (2) The removal of the whole cartilage—i.e., not merely the detached part. (3) Immediate post-operative treatment, consisting of active contraction of the quadriceps (quadriceps exercises should be learnt before the operation). (4) Continuous physiotherapy, consisting in the main of active exercises, which should not be too strenuous to start with. These should conclude with cross-country runs, long walks, and ordinary games.

It has been interesting to observe that patients whose treatment was discontinued on account of their going home on leave on compassionate grounds sometimes came back with the quadriceps less efficient than when they left. We believe this was because they ceased to do their regular exercises. They are now instructed to put half a brick in their tin hats and hang these over their ankles, and so do resistance exercises while on leave. The result of this simple instruction has been a decided improvement.

Results of Treatment

Since the opening of the rehabilitation centre, during the period under review, 86 cases have been treated to a conclusion. In 70 of these (81%) the time varied from 6 to 9 weeks, with an average of about 8 weeks. This probably errs on the long side, as some were certainly fit to leave the hospital a few days or more before they were discharged, but had to wait for posting orders. Sixteen patients took 12 weeks or longer. There were various reasons for this. Six had a persistent post-operative effusion. Most of these were in the rehabilitation centre about the same time, and we are inclined to think that they may have had too much treatment in the early stages and were straining their knee-joints. We have accordingly given up the use of weights and pulleys except as a weekly test to show the progress that has been made in the re-education of the quadriceps. In three cases two cartilages were removed, and there was an interval between the two operations. One patient had a partially calcified cartilage, one a semimembranosus bursitis, one tonsillitis, and one a generalized skin infection; and in three there were arthritic changes in the joint. There was therefore at least a partial explanation of the delay in each instance.

Long-standing Cases.—In 12 cases there was a history of the disability having extended over five years or more. It was interesting to see whether, in these cases, any one particular lesion was usually present. The lesions found, however, were varied. Four were of the bucket-handle type, two were posterior tears, one was a cyst in the internal cartilage, three were anterior, and two were intermediate. While, of course, it is impossible to say whether these patients had suffered from a lesion of the internal cartilage during the whole of the period for which they gave a history of disability, it is worth noting that in only three were there signs of arthritic changes in the joint. These patients were aged 24, 39, and 40 years.

Osteo-arthritis.—This was seen radiologically or at the time of operation in 11 cases. The average duration of treatment in these cases was 10 weeks. This, however, was increased by two cases of the previous series. If these cases are excluded the average duration of treatment was 8½ weeks. It appears that arthritis in a mild degree does not seriously interfere with post-operative recovery.

End-results

Of the patients included in the second series 4 had medical board examinations and were placed in Category C. The remaining 82 returned to duty in their original categories, so far as we are aware. As a check on these results inquiries were sent to the Regimental Records regarding the whole of the patients (Series I and Series II), and definite replies were received in respect to 78 patients. These were divided as follows:

Series I (Pre-rehabilitation)		31
Definite replies to letters of inquiry		
Graded A1	14 (45%)	
Discharged from Services	6 (19%)	

Series II (Post-rehabilitation)		
Definite replies to letters of inquiry		47
Graded A1	36 (77%)	
Discharged from Services	2* (4%)	

* One aged 45 and one non-cooperative when in hospital.

These figures do not, in themselves, prove anything, but they are an indication that the cases treated to a conclusion (Series II) have done much better than those discharged without this extension of treatment.

Conclusions

The policy of the Emergency Medical Service in segregating cases of certain types in special centres has made it possible to survey a large number of Service cases in a short period, and from them certain observations have been made:

(*a*) That a major cause of disability following removal of semilunar cartilages may be quadriceps insufficiency.

(*b*) That in long-standing cases no one particular type of lesion was found, nor was there any definite relation between the development of arthritis and the length of the disability.

(*c*) That arthritis of a mild degree has little effect on the length of post-operative treatment.

(*d*) That post-operative rehabilitation at a special centre is of the utmost value in ensuring the satisfactory recovery of Service patients.

(*e*) That operative treatment for lesions of semilunar cartilages in Service patients is well justified.

MITRAL SYSTOLIC MURMURS

BY

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Disagreement on the significance of certain systolic murmurs in the mitral area has imparted to these an ambiguity which has caused them to hinder as often as help in the diagnosis of heart disease. When electrocardiography and cardioscopy (radiological examination of the heart) were first enlisted as accessory methods to implement physical signs in the recognition of cardiac disorders, there was born a tendency to regard them as the principal tests and not as useful aids. This view gained a fillip from the uncertainty identified with the interpretation of added heart sounds and murmurs. Correlation of physical signs and radiological findings through the intervening years, however, has given to murmurs their true significance in terms of altered heart structure, and it is now possible to recognize, by clinical examination alone, most of the conditions which produce abnormal auscultatory signs. Of course, cardioscopy will continue to have great value in confirming the clinical impression, sometimes modifying or correcting it, and always showing the extent to which the disease alters the size and shape of the individual heart cavities.

Special Features of Mitral Murmurs

The need to recount the special features which characterize mitral murmurs receives emphasis in several departments of medicine to-day. Thus, in children the incidence of an innocent systolic murmur is high, and a faulty interpretation of this auscultatory sign is commonplace, condemning many of them unnecessarily to a life of semi-invalidism; routine medical examination of school children has inevitably subscribed to this episode. It should be a rule that no child is denied games and the healthy activities inseparable from a happy school life on account of a heart murmur of doubtful significance. Directly this suspicion has rested on a child arrangements for a special examination at a cardiac centre should operate automatically. Only in this way can unwarranted cardiac invalidism in children be avoided. Again, a young subject during convalescence from acute rheumatism is often confined to bed for several months because an innocent systolic murmur has been regarded as evidence of endocarditis or as a sign of mitral disease.

Medical examination of recruits before admission into the Services provides another circumstance in which the mitral systolic murmur is frequently misinterpreted. Thus, a subject with an innocent murmur may be rejected and classified as Grade IV, and another with a murmur signifying organic disease accepted into Grade I. The same problem may present in the case of young adults in civilian occupation during the medical examination admitting them to a life insurance: in none should the premium be "loaded" on the grounds that a murmur is present, unless it can be shown that it stands for a structural change in the heart. Again, a systolic murmur in the mitral area may loom prominently in older adults involved in a claim for compensation in respect of an accident, when the significance of the murmur will be debated in relation to the injury incurred. Then it is time to issue the warning that during the demobilization of members of the Services at the conclusion of hostilities none shall be awarded disability pension on the flimsy evidence of a murmur in the heart or in respect of the mischievous caption of "V.D.H."

For these reasons it is clear that there is need for an evaluation of this auscultatory sign in the diagnosis of heart disease and for examining the distinctive features which may identify a murmur with some precise cardiac disorder. A discussion of the subject is facilitated by assembling the several murmurs in three groups.

The Irrelevant Mitral Murmurs

The murmurs included in this group are easily recognized as a rule, and, since they usually display their main characteristics in some other auscultatory site, in relation to the mitral area at least they may be classed as irrelevant. A detailed description of these murmurs is therefore unnecessary, and little more than their mention will be made here. The *conducted* murmurs of congenital pulmonary stenosis and patent ductus arteriosus are best heard in the pulmonary area, and that of ventricular septum defect at a point internal to the mitral area. The *haemic* murmur in anaemia is associated with one in the pulmonary area; it is seldom so loud in the upright as in the reclining posture, and as a rule it is soft in character, although sometimes it may be rough and resemble the characteristic late diastolic murmur of mitral stenosis; successful treatment of the anaemia annuls the murmur. A systolic murmur may often arise from the cardiac *displacement* witnessed in pulmonary fibrosis, considerable pleural effusion, pneumothorax, and conspicuous depression of the sternum. In *tachycardia* from any cause, especially if accompanied by pyrexia, a mitral systolic murmur may appear, and disappear when the pyrexia subsides and the heart slows.

The Innocent Murmur

Misinterpretation of this murmur, which is commonplace, may be avoided by a close regard of its characteristic clinical features, which will now be considered.

The innocent murmur is not a significant or noteworthy murmur; some length of clinical experience may be necessary to judge its peculiar intensity, but it is enough to remember that it is neither a loud nor a long murmur. There is one notable exception to this rule—namely, that when the murmur is *late* in systole and placed as near to the second heart sound as the first, it can be loud (and usually it is loud), and yet it is an innocent murmur: the importance of recognizing this fact lies in the common incidence of the auscultatory finding.

Most organic murmurs are better heard with the patient in the reclining posture, and this may sometimes be true of the innocent murmur; but when the murmur is decidedly louder in the upright posture it is the innocent kind.

In instances in which a trivial systolic mitral murmur becomes louder in the reclining posture, and in which a murmur develops at the base of the heart and particularly in the pulmonary area, the innocent nature of the murmur can be presumed.

Any murmur or heart sound is loudest at the end of expiration, but if during the inspiratory phase a murmur disappears it belongs to the innocent type.

A systolic murmur attendant on organic heart disease invariably gains in intensity with tachycardia, but the innocent murmur often weakens as the heart rate increases.

Naturally when a murmur has been judged to be the innocent kind no heart disease can be made out by further examination, including cardioscopy. Recourse to this test should be had whenever the identity of the murmur remains in doubt from clinical examination alone. At all events when the test is readily available it should be used to endorse the clinical impression which has been gained. This test, reliable as it obviously is, should not, however,

be allowed to displace our trust in these simple auscultatory signs, which seldom miscarry in the evaluation of this murmur.

Nothing is gained by debating the mechanism of the innocent mitral systolic murmur; for in such a debate, which cannot muster facts and must naturally resort to theories and fancies, lies the danger of allowing this murmur to continue to mystify clinicians. Let us instead adhere to actual clinical findings, and allot to them their proper values in terms of structural changes in the heart as told later by cardioscopy or even necropsy.

The Murmur of "Mitral Incompetence"

As often as we diagnose mitral incompetence, can we prove that the blood regurgitates from the left ventricle into the left auricle during systole? What is the evidence of mitral incompetence when the heart is examined at cardioscopy or necropsy? Certainly when the analogy between this condition and the standard effects of other cardiac abnormalities is considered, enlargement of the left auricle should be a constant finding; but this sign is absent unless some cause other than mitral incompetence is operating, notably mitral stenosis and, less often, prolonged hypertension. The diagnosis of aortic incompetence has a significant meaning because precise signs (clinical, radiological, and pathological) are identified with the lesion. We have no such clear impression of mitral incompetence. It is time, then, to be rid of the term; if preserved it will continue to frustrate the precise diagnosis of heart disease. Instead, when a systolic murmur in the mitral area has not been identified with the irrelevant mitral murmurs in the first group, or the innocent murmur in the second, it should be regarded as standing for mitral stenosis, aortic stenosis, aortic incompetence, or prolonged hypertension; and, less frequently, cardiac aneurysm and cardiac enlargement in heart-block.

The murmur is moderately loud, and is usually best heard with the patient in the reclining posture, although assuming the upright position does not annul it. It is sometimes soft, but as a rule it is roughish or even rough. It is unaffected by respiration, and may become louder when tachycardia is induced.

These clinical states which are common causes of a mitral systolic murmur need only be discussed briefly.

Mitral Stenosis.—Whenever a systolic murmur in the mitral area is considered to indicate mitral disease the term "mitral stenosis" should be used in the diagnosis and not "mitral incompetence." This is in keeping with changes in the heart, for both at cardioscopy and at necropsy the findings are those resulting from the stenotic effect.

It is necessary to assemble other clinical signs to confirm the presence of mitral stenosis in addition to the systolic murmur, which is moderately loud and is best heard in the reclining position, with the patient turning on to the left side after tachycardia has been induced by exercise. A past history of acute rheumatism is small supporting evidence, since not all cases of acute rheumatism develop mitral stenosis and not all cases of mitral stenosis provide a past history of the infection. A thrill in the mitral area is strong evidence of mitral stenosis. A diastolic murmur (always rough) in the position of the third heart sound (mid-diastolic) also stands for mitral stenosis, although it is not an early sign. In fact, when the lesion is young the clinical deduction that a systolic murmur in the mitral area indicates the presence of mitral stenosis may be drawn from finding a significant systolic mitral murmur in the absence of aortic valvular disease, hypertension, and conspicuous cardiac enlargement: cardioscopy should come into regular use here to confirm a well-considered clinical opinion.

In *aortic stenosis* it is unusual to find the mitral area without a systolic murmur. As a rule this murmur is less loud than in the aortic area, but it can be as loud; should it be much louder in the mitral area the added diagnosis of mitral stenosis should be entertained.

A mitral systolic murmur is present in all but early cases of *aortic incompetence*. It should become the custom to expect this murmur in both aortic stenosis and aortic incompetence when there is no need to seek any other explanation of the auscultatory sign.

A systolic mitral murmur is hardly ever absent in *prolonged hypertension* when considerable cardiac enlargement is also a common association. It is not denied that in cases of gross left ventricular hypertrophy some degree of mitral regurgitation takes place; but the view held here is that this diagnosis alone, devoid as it is of a radiological or pathological pattern, does not usefully add to a precise diagnosis of the cause—namely, hypertension.

Cardiac aneurysm following cardiac infarction, and the enlarged heart associated with some instances of *heart-block*, are two rarer causes of a systolic murmur in the mitral area, but the characteristic ancillary data will readily explain the significance of the auscultatory sign.

Conclusion

So long as auscultatory signs in the heart remain unidentified with characteristic features, so long will they miscarry in diagnosis and frustrate the proper management of patients presenting them. The time is overdue to unify our views on the commonest of them all, the systolic murmur in the mitral area.

TREATMENT OF CHRONIC ULCERATIVE COLITIS BY PNEUMOPERITONEUM

BY

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In many cases of chronic ulcerative colitis conservative medical treatment is ineffective. A considerable number of drugs are usually tried, and patients are kept in bed for months under strict diet and daily irrigations. Some recover after prolonged treatment, others find temporary relief, but there are always cases which seem intractable. Sufferers from this not rare disease frequently belong to the intelligentsia between the ages of 20 and 30, and as even milder forms with 8 or 10 daily bowel motions make them unsociable and unfit for work, drastic therapeutic methods have been employed.

Many writers are in favour of extensive colon resection, and H. W. Cave of New York proposes subtotal colectomy as the method of choice. He believes that the percentage of lasting cures is so small that colectomy is a measure of necessity. On the contrary, we have obtained excellent results in chronic, apparently intractable, cases with a far less drastic and dangerous method—the establishment of a therapeutic pneumoperitoneum and its maintenance over several months. With this measure the patient is not confined to bed except for the first few days, and his sojourn at the hospital can be limited to a short time. Indications for pneumoperitoneum were made on clinical grounds—perchronicity, diarrhoea, pus, mucus, blood in stools, intractability—and little weight was put on bacteriological findings, as various organisms caused clinically indistinguishable forms.

Technique of Pneumoperitoneum

The technique is simple, and can be carried out by any practitioner. The therapeutic pneumoperitoneum may be installed with any model of the usual pneumothorax apparatus and with the same needles as are used for the pneumothorax—the most suitable being fairly thin ones with closed, wedge-shaped, not very pointed end and lateral opening, and a diameter of about 1/25 in. or less. Using such needles, local anaesthesia is not required. The best place to puncture is about an inch to the left of and below the umbilicus. After painting the skin with iodine, and examining the needle for free passage of air, the skin is well stretched between two fingers to give resistance to the needle, which, still in connexion with the manometer of the pneumothorax apparatus, is pushed through skin and abdominal wall. After short practice it is not difficult to distinguish, from the resistance to the needle, the layers of the abdominal wall, and particularly the piercing of the peritoneum. This moment is rather more painful than when the pleura is pierced, but with sufficiently thin needles I have never found it necessary to use novocain, which would make it more difficult to distinguish the abdominal strata. It also seems that the patient soon becomes accustomed to

the pain of the piercing of the peritoneum, and after several refillings it is felt but little.

It is more important than with pneumothorax to feel the strata at the progress of the needle, as of course the manometer gives no indication whether the needle has passed the peritoneum. The danger of piercing the bowels seems very remote: the smooth intestines escape the needle if they are not too tympanitic and if the needle is not too pointed. Also, with the finer needle there would be no danger if the bowels were pierced.

Before passing air through the needle it is advisable to test with a stylet whether blood or any liquid is present. The amount of gas introduced averages 500 c.cm.—oxygen or air being used. The reading at the manometer is round about zero, rising slightly after the filling of each fraction and dropping again quickly, eventually remaining at 2 or 3 cm. H_2O. Sometimes slight oscillations corresponding to the respiration are noticeable. If the needle has not yet reached the peritoneal cavity the manometric pressure of course rises rapidly, even after introducing the smallest amount of gas. The manometer serves in this sense as a control.

Another control is the reduction and the disappearance of the dull liver sound on percussion. During or soon after the filling, the patient usually complains about the sudden appearance of pain in one or both shoulders; this is of so regular occurrence that it is advisable to tell the patient beforehand about it and to reassure him. The appearance of this phenomenon and the projection of pain to the shoulder region are obviously due to the phrenic nerve, and can also be used as a control; the effectiveness of the filling can further be checked by means of radiographs.

Refilling can be done once or twice weekly; when pure oxygen is used the intervals are 3 or 4 days because of more rapid absorption. When air is used the intervals are from 6 to 8 days. Because of its calming effect oxygen is preferable for the first fillings for cases with major abdominal discomfort and frequent colics, and for cases with a higher grade of secondary anaemia and dyspnoea. The number of fillings required varies greatly, and it may be necessary to continue treatment for three months or more.

Results

Of the 7 cases in the series only one was treated for more than 3 months.

Case 1.—A woman aged 28 had been suffering for 3 years from severe diarrhoea. She had from 15 to 25 bowel motions daily—in better periods and under the influence of opium 10 to 12 motions—always with an admixture of mucus and blood, occasionally pus. Loss of weight was 46 lb. in 3 years. During three months' treatment with pneumoperitoneum the number of bowel motions was steadily reduced and she regained 17 lb. Her general condition improved, and finally the stool was free from mucus and blood. The diagnosis of ulcerative colitis had been confirmed by sigmoidoscopy. Investigation after one year showed that she was free from complaints and had further gained in weight.

In one case only two fillings were required. Particulars of this case are as follows:

Case 2.—A man, part Polynesian, aged 42, had been suffering from symptoms of chronic colitis for several years. His loss of weight was over 30 lb. and there was incapacity for work and general debility. After pneumoperitoneum and one refilling he felt well. No sigmoidoscopy had been carried out; the presence of a tumour in the colon suggested by severe secondary anaemia had been excluded by radiological examination. Re-examination after 7 months showed that the patient had gained 14 lb. He was still feeling well and was able to work.

In some cases a moderate amount of peritoneal effusion developed; this liquid was sooner or later reabsorbed spontaneously. In such cases it is advisable to give 10 c.cm. of calcium chloride intravenously 3 times weekly. It appeared also that patients who developed temporary ascites responded more quickly to treatment.

Summary

The therapeutic action of pneumoperitoneum is probably due partly to activating the visceral peritoneum and "tuning it to a higher pitch" by the setting up of a permanent bland irritation to the vast peritoneal surface, and partly to mechanical action and indirect influence on the autonomic nervous system.

Pneumoperitoneum may be described as a simple and effective therapeutic procedure in apparently intractable cases of chronic ulcerative colitis. It is easily performed, and is free enough from danger for it to be introduced, and for refillings to be made, by any practitioner, even without the facilities of a clinic or a hospital.

SOME OBSERVATIONS ON BILIARY PAIN

BY

ALASTAIR A. DOUGLAS, M.D., F.R.C.S.Ed.

The recent article by Mr. F. R. Brown (1942) in the *Journal* has prompted me to record some clinical observations on biliary pain. The classical "pain" of what is loosely termed biliary colic is really, of course, a pain complex, which has been split into components and explained by Morley (1931). My hope is only to add a very little to what he and others have already said.

Components of the Biliary Pain Complex

I think that in a fully developed case five components of the complex can be recognized, though more commonly only two or three are met with.

1. In most cases of biliary colic the pain is first felt by the patient as a violent if dull ache in the central epigastrium, coming in waves. Like other visceral pains it is absorbing, so that the sufferer for the time being is as if paralysed, and almost identified with his own pain. If he can divert his attention from it for long enough he will pass his hand from side to side across his epigastrium, from one costal margin to the other, to indicate its position, which he still cannot describe with any accuracy. I should be inclined in the case of biliary colic to convert the vertical oval in Fig. 5 of Brown's article to a horizontal one (Fig. 1). In some cases, more particularly when the attack is short and infection slight or absent (as evidenced by freedom from pyrexia and leucocytosis), this component is the only one felt, and there may be no tenderness over the gall-bladder. I have also been able to observe one of the cases in which an idiosyncrasy to morphine has developed after cholecystectomy, and which Smyth (1941) quotes Walters (1938) as ascribing to spasm of the sphincter of Oddi. In this case the pain provoked by morphine was

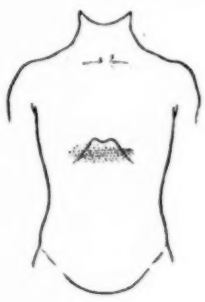

FIG 1

FIG 2

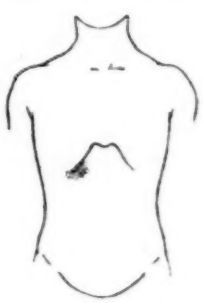

FIG 3

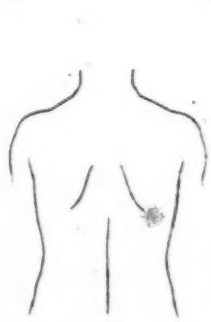

FIG 4

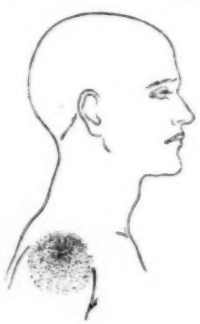

FIG 5

of the nature described above—a severe but not definitely localized transverse pain in the epigastrium.

2. The second component is certainly inconstant, but I am surprised that I cannot find any direct reference to it in the books I have consulted. Moynihan (1905) mentions that pain (during the acute colicky phase) may be felt in the chest, and Cope (1925) recorded pain in the back of the neck in a patient found to have a stone in the common bile duct. He also quotes Reynolds's *System of Medicine* as mentioning pain radiating to the clavicles; but I cannot find a suggestion that there is a second type of visceral pain occurring in biliary disorders. I feel satisfied that there is. It is a severe dull ache, said by the patient to be in the neck—most severe in the back of the neck, but also radiating in front to the clavicular regions. It is symmetrical, and one patient described it as "like a necklace of pain" (Fig. 2). It may be so severe as to overshadow the epigastric pain, which is also present. It occurs early in the attack, accompanying the first component.

3. As is well known, rather later in the attack a third component appears—pain in the right side below the costal margin, and accurately located by the patient. At the same time local tenderness develops, elicited by very light tapping with the tip of a finger (Fig. 3).

4. The fourth component often arises about the same time, is met with in severe attacks, and is said by the patient to "go through to the back"—to the region of the angle of the right scapula. In character it is similar to component 3, and different from the paralysing waves of pain of components 1 and 2 (Fig. 4).

5. According to Morley (1931) shoulder-tip pain is present in only 5% of cases. In my experience it is not remarked on by the patient during the colic, though it may be present; but the information can at times be elicited from him that it preceded or followed the attack. It resembles components 3 and 4 in nature, and is often thought by the patient to be an intercurrent rheumatic pain (Fig. 5).

Explanation of the Various "Pains"

The explanation is an interesting exercise in the light of current theories. According to Brown's theory of primary position, the first component is related to the derivation of elements of the bile passages from an outgrowth of the foregut caudal to the stomach, and thus innervated by the 8th and 9th thoracic nerves, which is the segmental distribution of the pain. I submit that there are also good embryological grounds for an explanation of the situation of the second component, which to my mind is also a visceral pain. Mesodermal elements of the bile passages derive from the septum transversum, like the central part of the diaphragm, and, also like it, are innervated from the primary positional nerves C3, 4, and 5. The visceral pain connected with these elements would, according to Brown's hypothesis, be felt in the region of the neck supplied by these nerves, and this accords exactly with my observations.

It seems hardly necessary to repeat Morley's explanation of the third component. The inflamed or congested peritoneal coat of the gall-bladder irritates an area of the parietal peritoneum and sets up "peritoneo-cutaneous radiation" from the nerves of the anterior parietal peritoneum to the more superficial branches. I would add two observations in support of this view. First, in cases in which the inflammation of the gall-bladder has practically subsided pain can be reproduced by the patient's actively protruding and retracting the abdominal wall for a few seconds, or it may be provoked by walking—both of which movements can be taken to increase friction between the gall-bladder wall and the anterior parietal peritoneum. Furthermore, in one case of chronic cholecystitis, later confirmed by operation, the localized pain below the right costal margin came on before the main meal of the day, was aggravated by walking, and was at once relieved by taking the meal. The clinico-pathological interpretation is as follows. When the inflamed gall-bladder was distended with bile it was in contact with the anterior parietal peritoneum, and pain was set up which was relieved by the shrinking of the gall-bladder and its retraction after the meal.

The fourth component is explained in a similar way by cutaneous radiation occurring from the posterior parietal peritoneum, which later in the attack becomes inflamed. That considerable disturbance does take place in this region is shown by the frequent occurrence of crepitations, and by other evidence of congestion at the base of the right lung.

Morley (1931, p. 28) remarks that while gall-stones do not at all commonly give rise to shoulder-tip pain they are responsible for almost the only reference to it in the surgical textbooks. He adds: "The reason of this is to be found in the confusion that has arisen between the 'shoulder pain' or pain radiating to the angle of the right scapula, which is an almost constant feature of biliary colic, and true shoulder-tip pain due to phrenic stimulation."

I suggest that the pain in the back of the neck and clavicular regions, which I have described as the second component and which has all the features of visceral pain, is an equally likely cause of the confusion. Shoulder-tip pain properly so called does of course arise in biliary disease. Hurst (1934), for example, mentions it as occurring in hepatitis or "bilious attacks." A very interesting light on this problem was shed by a case I observed a few months ago.

The patient, a healthy man aged 36, had a severe attack of epidemic catarrhal jaundice, the source of infection being known, and he also in his turn infected a third person. On the tenth day of his illness, the jaundice being very deep, I casually asked him if he had shoulder-tip pain, and he agreed that he had. On local examination, a striking appearance of the right shoulder presented itself. There was an area of erythema, slightly raised above the surface and dotted with small closely set papules. It was almost circular in outline, and was five inches in diameter, with its centre over the tip of the acromion process (Fig. 5). It corresponded exactly with the area outlined in an illustration in Morley's book (p. 37) showing the area of pain and hyperalgesia in a case of traumatic laceration of the spleen.

It seems justifiable to assume that in the case described a corresponding area of stimulation on the right side was the cause of the pain and its accompanying phenomena—namely, the contact of the inflamed surface of the liver with the central part of the diaphragm. This leads me to the conjecture that shoulder-tip pain in biliary disease is commonly due to concomitant hepatitis. The cutaneous eruption faded in a few days, and I was unable to elicit any marked hyperalgesia over it. Whatever the explanation of the process which had given rise to it, there can be no doubt as to its objectivity, and it seems to me to give support to Morley's views.

It is to be noted that the five components may follow one another in varying order. Thus in one case the first complaint was of pain below the right costal margin of several weeks' duration (third component), and probably attributable to commencing metastatic infection of the gall-bladder. This was followed by slight jaundice and shoulder-tip pain (fifth component), presumably due to hepatitis; and then a few days later by the first and second components, which coincided with attempts by the gall-bladder to expel solid or semi-solid matter which had precipitated by this time.

Summary

The biliary pain complex is split up into five components and explained in the light of current theories. Special reference is made to a variety of visceral pain arising in the bile passages which is not well recognized. Reference is also made to a case of epidemic jaundice in which shoulder-tip pain was associated with a cutaneous eruption.

I am indebted to Mrs. J. M. D. Young for the figures

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The name of the Federal Council of Australian Aerial Medical Services has recently been changed to "Flying Doctor Service." The service has six bases in remote parts of Australia, which keep in touch with about 250 outposts by two-way radio. The cost of upkeep is £21,000, partly financed by the Federal and State Governments and partly by private contributions. The service is at present suffering from shortage of staff because many doctors, pilots, and wireless operators have enlisted.

Medical Memoranda

A Case of Adenocarcinoma of Jejunum

Malignant tumours of the jejunum are not common. Stein (1937) finds that they comprise only 1.3% of all malignant bowel tumours—including the stomach—over a five-year period. A study of 108 cases of malignancy in the small intestine by Chas. W. Mayo (1940) showed that the average age of patients was 52 years. These cases formed 0.7% of all malignant bowel tumours over a period of 33 years. He finds that only 42.4% are resectable and the mortality is 30%. The case here recorded is of interest because of the age of the patient, the lack of bowel symptoms, and the size of the tumour.

CASE RECORD

An Army patient aged 29 was admitted to a medical ward in this hospital in Jan., 1942. He gave a history of pain in the back. It was of an aching character, almost always present, made worse by marching, and relieved by taking a deep breath. The pain had been present for five or six weeks. He had been treated elsewhere four weeks before admission, and had been given tablets, which afforded relief. There was no history of cough or night sweats. He did not know if he had lost weight, but realized he had lost colour. He had vomited twice, but there were no other abdominal symptoms whatever. A mass was discovered in the abdomen, and I was asked to see him on Jan. 20.

Examination showed a very pale man with a slight cyanotic tinge to his mucous membranes. There was a mass to the left of the umbilicus; it was as big as a grapefruit, hard, somewhat irregular, not tender, and could be pushed up until the upper edge was hidden behind the left costal margin. The essentials of the blood picture were: R.B.C. 2,100,000; haemoglobin 45%. I advised transfusion and laparotomy, the provisional diagnosis being malignancy of colon or greater curvature of stomach. A transfusion of 750 c.cm. of blood was given that afternoon (Jan. 20), and the man was transferred to the surgical unit.

Next day a second drip transfusion was given, during operation, which was carried out under gas, oxygen, and ether. A left paramedian incision disclosed a large tumour of the upper jejunum, involving the mesentery to a much greater extent than the bowel. The proximal edge of the tumour was only a few inches from the duodeno-jejunal junction. The mesenteric involvement demanded a wide bowel resection (30 in.): to do this the duodeno-jejunal flexure and part of the third portion of the duodenum were mobilized. Resection and side-to-side anastomosis were performed. On Jan. 23 the red cells numbered 4,600,000, with haemoglobin 80%. The patient was very well despite a productive cough. On Feb. 6 he was up and about.

The pathological report reads: " Sections show an adenocarcinoma, apparently primary in the jejunum, invading deeply into the mesenteric tissues and local lymph glands."

I am indebted to the Department of Health for Scotland for permission to publish this case.

A. H. SANGSTER, F.R.C.S.Ed. & Eng.,
Surgeon in Charge of Surgical Unit in an E.M.S. Hospital in Scotland.

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Gynaecomastia produced by Desoxycorticosterone Acetate (Doca)

Enlargement of the male breasts during treatment of Addison's disease with " doca " seems to be unrecorded, but it occurred recently in a patient under my care.

A diabetic man of 32, who had lived on insulin for 20 years, developed typical Addison's disease in the autumn of 1941 and a severe crisis in 1942, from which he was rescued by large doses of eschatin salt, etc. Later an unsuccessful attempt was made to substitute doca, and large doses were given. After 15 mg. daily for a week the breasts were perceptibly enlarged, and after 20 mg. for another week much more so. They began to subside 3 days after stopping doca and resuming eschatin, but did not become normal until 2 weeks later. *Pari passu* with this enlargement the patient experienced intense libido, including erections, in spite of extreme debility and the feminine breast manifestations. The latter consisted in considerable general glandular enlargement and slight tenderness, without nipple changes or any sign of lactation. I did not try to reproduce the effect by another course of doca as it caused general oedema. The maintenance dose of cortical extract is 30 c.cm. eschatin a day.

Doca has been shown to cause gynaecomastia in mice (*Proc. Soc. exp. Biol.*, N.Y., 1939, **41**, 389), and eschatin (6 c.cm. daily) in one male patient with Addison's disease (*J. Amer. med. Ass.*, **1938, 111,** 412). In my case, however, eschatin alone had no such effect, for when doca was stopped the mammary enlargement disappeared in spite of continuous large doses of eschatin.

R. D. LAWRENCE, M.D., F.R.C.P.

Reviews

ACUTE HEAD INJURIES

Acute Injuries of the Head: Their Diagnosis, Treatment, Complications, and Sequels. By G. F. Rowbotham, B.Sc., F.R.C.S. With a foreword by Norman M. Dott, M.B., F.R.C.S.Ed. (Pp. 288; illustrated. 25s., plus 7d. postage.) Edinburgh: E. and S. Livingstone. 1942.

This book should rank high among monographs on head injury. It is written in a direct and practical way, primarily for those responsible for the early treatment of head injuries—that is to say, for surgeons and general practitioners who have had no special training in neurology or neurosurgery; and thus, in an attempt to supply the necessary background, the author has included much information of a general kind on such subjects as cerebral localization, radiographic methods, and neurosurgical technique. The main sections of the book deal with pathology, diagnosis, and treatment of head injuries, but there are also chapters on the dynamics and on the sequels of head injury. Mr. Rowbotham was well qualified to write this book: first with Prof. Geoffrey Jefferson, to whom the book is appropriately dedicated, and then in his own clinic at Newcastle, he has personally dealt with over 1,000 cases of head injury. That his experience has been comprehensive may be judged from the fact that he reports observations on 200 patients unconscious after head injury, and 500 cases of the post-concussional syndrome, as well as on gunshot wounds and air-raid casualties.

Of the need for a book of this kind at the present time there can be no possible doubt. From the figures which Mr. Rowbotham gives it is not improbable that head injuries in this country amount to well over 100,000 a year. The majority of these are, and must continue to be, treated from first to last by general practitioners and general surgeons, and, as the war has revealed, the treatment provided has been not infrequently at fault, especially the manner of repair of open wounds and the management of convalescence. This book provides sound and detailed instruction in the diagnosis and treatment of acute head injury, with admirable hints on the nursing problems; and the picture is not obscured, as so often it was in the past, by attempts on the part of the writer to link the symptoms with hypothetical pathological events. The instructions for treating shock, and examining for injuries in other parts of the body before attempting to treat the head wound, are just what the surgeon dealing with accidents requires. For severe head injuries, with certain reservations, the author favours moderate dehydration, though the figures he quotes to support active surgical measures—such as dehydration, spinal drainage, or decompression—are without statistical significance. Apart from repair of head wounds, operation is only required in a very small proportion of the cases, and the detailed description of the operation of subtemporal decompression seems rather unnecessary in view of the fact that Mr. Rowbotham performed it only 5 times in his 1,000 acute cases. It is also open to question whether the general surgeon is qualified or equipped to perform the operation.

In the section devoted to the sequels of head injury there is a comprehensive and sympathetic account of the factors which interfere with the patient's adjustment to his accident. The author has very definite ideas about the causes of post-traumatic headache and dizziness: he believes that they are mostly organic in origin, but he recognizes also that they are subject to psychological influences, and that in each case there is an interplay of the functional and the organic. There is much useful information on the compensation aspect of head injuries, but the reader is perhaps left with an unduly gloomy view of the late results of head injury. There is too little indication of the fact that by far the most common sequel of head injury is early return to work and, in spite of occasional headaches, a fairly rapid recovery of previous working capacity. Failure to recognize this fact handicaps the doctor considerably in the after-treatment of head injuries.

The subject of head injuries is a complicated one, and Mr. Rowbotham has not sought to over-simplify. He has produced a well-printed and well-illustrated book which will act as a guide and stimulus to all who deal with the immediate

and remote effects of head injury. In the words of Mr. Norman Dott, who writes a foreword, Mr. Rowbotham shows "a wide grasp of the problems raised by brain injury—neurological, psychiatric, and social, as well as surgical."

MEDICAL ASPECTS OF WORKMEN'S COMPENSATION

Workmen's Compensation and the Physician. A Manual for the Use of General Practitioners and Insurance Carriers. By Henry H. Jordan, M.D. With a Discussion of Traumatic Neuroses by Paul H. Hoch, M.D. (Pp. 180. 16s.) London, New York, and Toronto: Oxford University Press. 1941.

No volume similar to this has yet been written in the United Kingdom, probably because the medical profession have not hitherto regarded workmen's compensation as the important branch of medicine which it is. Dr. Jordan has spent twenty years at this work, partly in charge of a clinic for injured workmen and partly as a medical referee, and has drawn upon an experience of over 30,000 compensation cases. He felt the need in the United States for a small book which would tell the general practitioner and the insurance carrier the basic principles of the treatment of "compensable injuries." It stresses the peculiar problems which arise when a workman, as distinct from an ordinary patient, suffers from an injury. The author therefore deals, concisely but most usefully, with such questions as causal relation between injury and disability, the aggravation of pre-existing disease, expert opinion, and the evaluation of disability. After some sound practical advice on the first examination of the injured employee, he discusses treatment in the consulting room and the home, admission to hospital, and treatment by specialists. He devotes a special section to *x*-ray examination, the interpretation of findings and expert opinion, common causes of diagnostic errors, and the postulates which should protect the doctor against them. Other chapters deal with physical therapy and orthopaedic appliances, and Dr. Hoch's section on traumatic neuroses is a useful introduction to this difficult subject.

The book is short, and does not purport to be more than a condensed guide. As such it may be warmly recommended to every practitioner who is called upon to act in these cases. The reader may, however, hope that Dr. Jordan will some day write a far fuller treatise on the subjects which he here outlines so ably.

A MIDWIFERY TEXTBOOK

Midwifery. By Ten Teachers. Under the direction of Clifford White, M.D., M.S. Edited by Sir Comyns Berkeley, Clifford White, and William Gilliatt. Seventh edition. (Pp. 562; illustrated. 18s.) London: Edward Arnold. 1942.

Time and the war have brought changes to the distinguished list of contributors to this excellent little textbook. One of the original ten, Dr. Barris, has been replaced by Mr. John Beattie, and Major (now Colonel) Frank Cook has been temporarily replaced on the editorial staff by Mr. Gilliatt. The book has been thoroughly revised and greatly improved, but reduced in size. From cover to cover it is full of concise and sound obstetrical teaching. Emphasis is placed on the value of Caesarean section in the treatment of placenta praevia, but the student is reminded that good results can be obtained only if adequate facilities and skilled assistance are available. In discussing abnormal uterine action the authors now use the phrase "tonic retraction" in place of "tonic contraction"—a useful change, but one that will be disputed by some teachers. The suggestion that 5 to 10 units of pitocin should be injected into the uterus before the delivery of the child in lower-segment Caesarean section has little to commend it: the practice can make an easy operation difficult and even result in foetal death. The new edition will maintain the popularity of its predecessor.

Notes on Books

For years past Dr. T. WILSON PARRY has pleased his friends by sending them at Christmas a copy of his latest verse, usually in sonnet form. He has now published some of these, with additional pieces, in a pamphlet, *The Spirit of "This England"* (The Mitre Press, Mitre Street, E.C.3), which well represents his feeling for beauty and for metre.

The appearance of a third edition of Dr. BRADFORD HILL'S *Principles of Medical Statistics* (published by the Lancet Limited at 7s. 6d.) is evidence that, even in wartime, scientific education continues. The present does not differ substantially from the second edition, and we need not repeat in detail what was said in an earlier notice. We congratulate both Dr. Hill and his readers on a notable success.

Science and World Order is the title of a 9d. Penguin Special in which J. G. Crowther, O. J. R. Howarth, and D. P. Riley use as their raw material the communications made by a number of speakers at the conference on that subject held under the auspices of the British Association in September, 1941. The text has been prepared with the authority of the Council of the Association, and it includes chapters on science and government, world resources, health and food, post-war relief, and science and world planning. The chapter on health and food quotes in particular from Sir John Orr's address to the conference.

The *Fifth Supplement to the British Pharmaceutical Codex, 1934*, contains a number of additions and amendments to monographs and a cumulative index to the five Supplements. The amendments include changes in the formulae for preparations in which quinine is not regarded as an essential constituent, in accordance with recommendations of the Therapeutic Requirements Committee of the Medical Research Council. This Supplement like its predecessors, is published by the Pharmaceutical Press, for the Council of the Pharmaceutical Society of Great Britain, and the price is 2s. 6d.

Preparations and Appliances

CLAMPS FOR ABDOMINAL SURGERY

Mr. D. LANG STEVENSON, F.R.C.S., surgeon to the Oldchurch County Hospital, writes:

As I have found a pair of small clamps made for me by Mr. Schranz of the Genito-Urinary Manufacturing Company to be of considerable value in gastro-intestinal surgery, a brief description of their use may be of interest to other surgeons.

The clamp, which is here illustrated, is 8 in. long with a blade length of 3½ in. The closed blades on the flat taper from 1/4 in. to 1/8 in. at the tips, whilst on the opposite aspect they have a uniform width of about 1/8 in.

The clamp combines to an unusual degree the advantages of lightness, slenderness, and strength. Gut is held securely in the bite of the narrow blades by means of a single deep longitudinal groove in one of them and a corresponding ridge on the other. In these respects this clamp excels any other that I have seen designed for the same purpose. With the extreme cut edge of stomach or intestine in the control of the clamp a clean and bloodless closure or anastomosis is greatly facilitated.

Some of the numerous instances in which these instruments have proved their usefulness in simplifying and perfecting technical procedures in gastro-intestinal surgery are closure of the duodenal stump in gastrectomy; aseptic anastomosis after resection of bowel, or for the accomplishment of cholecystenterostomy; and closure of colostomies or intestinal fistulae.

SULPHANILAMIDE FOR LOCAL APPLICATION

Attention has been drawn recently to the risk of anaerobic infection from locally applied sulphonamides. To obviate this risk a sterile preparation of sulphanilamide is now issued by Burroughs Wellcome & Co. as "Wellcome" brand sterilized sulphanilamide compound, a free-flowing mobile powder consisting of finely divided sulphanilamide with 5% of zinc oxide; the latter is to facilitate complete sterilization without aggregation of the sulphanilamide particles, and also to retard absorption of the compound from the site of application and thus prolong the local chemotherapeutic action. The product is issued in bottles of 15 grammes.

BRITISH STANDARD HAEMOGLOBINOMETER

A new British Standard specification for haemoglobinometers (Haldane type), No. 1079/1942, has been published, and copies are obtainable from the British Standards Institution, Publications Department, 28, Victoria Street, London, S.W.1, price 2s. (2s. 3d. post free).

Hitherto there have been inconsistencies between colour tubes. Further, in the Haldane method as practised an inconvenience is that neither colour tubes nor graduated tubes are fully interchangeable but have to be matched up so that colour tubes are only used with graduated tubes of the same internal diameter. The new standard defines the colour tubes on the trichromatic scheme adopted by the International Commission on Illumination in 1931. This provides a permanent definition of the tubes and makes possible the rapid verification of any individual tube. Further, all colour tubes complying with the specification are interchangeable with each other. There are provisions which ensure the interchangeability of the graduated tubes, so that any graduated tube complying with the specification may be used in conjunction with any standard colour tube.

There is evidence that the new standard colour tubes are in close agreement with Haldane's original standard; the use of the new standard does not call for any change in technique in testing a sample of blood; and the manufacture of tubes to comply with the specification does not complicate, but in some ways simplifies, the method of production. Hence with the minimum departure from current practice the new standard will enable different workers to obtain results on a more strictly comparable basis than has hitherto been possible.

The National Physical Laboratory is prepared to accept haemoglobinometer colour tubes and graduated tubes for examination for conformity with the British Standard specification. Besides examining tubes definitely made to comply with the specification, the N.P.L. will accept from users tubes which have already been employed in the examination of blood samples and report how far they depart from the new standard. Full particulars of the tests and the fees charged may be had from the Director, National Physical Laboratory, Teddington, Middlesex.

CANCER RESEARCH IN SOUTH AMERICA

A detailed account of the activities of the Institute of Experimental Medicine (for the study and treatment of cancer), Buenos Aires, is given in a recently published volume[1] of 921 pages. The *Boletin* is issued periodically and is devoted primarily to the work carried out under the direction of Prof. Angel H. Roffo, whose contributions to the study of the cancer problem are widely known. It includes several original papers and notes by Prof. Roffo and his colleagues, and also contributions from other S. American workers, and gives an impressive picture of the work being developed in this field in the S. American countries, particularly Argentina. That the clinical and social aspects of cancer are not neglected is clearly demonstrated by the statistics and other data in this volume.

Prof. Roffo's own paper on "experimental gastric carcinoma induced by ingestion of fuel-oil distillates" is a suggestive contribution to the theory that the products of combustion of petrol may be a factor in the production of cancer in town-dwellers. The paper is illustrated by 19 photographs and 44 photomicrographs, all of which are excellently reproduced. Two notes by Prof. Roffo's son—"CO in Patients with Carcinomata" and "Induced Radio-activity"—are followed by another work on maxillary tumours by Prof. Roffo and Dr. del Giudice, and an account is given of the surgical treatment of carcinoma of the penis, based on 350 cases admitted to the Institute from 1936 to 1940. Dr. A. Carini from São Paulo (Brazil) contributes a note on a spontaneous carcinoma in the skin of a rabbit with metastasis in the lungs, and Drs. G. Gonzalez and J. Boggino from the Faculty of Medicine of Asunción (Paraguay) describe a case of plasmocytoma or plasmocytosarcoma of the ribs, diagnosed by biopsy. Several other interesting contributions by Paraguayan doctors are also included. All papers are well illustrated. Rather more than 100 pages at the end of the volume are devoted to the affairs of the Institute, in which 1,780 patients were seen during the second quarter of 1941, while during the same period 237 surgical operations were performed and no fewer than 11,760 treatments with radiation were given. Books, reports, and papers received from several countries by the Institute are also briefly reviewed, and include the *Annual Reports* of the British Empire Cancer Campaign and the Imperial Cancer Research Fund.

[1] *Bol. Inst. Med. exp.* (para el estudio y tratamiento de cancer), 1941 **18**, No. 57. Buenos Aires.

OPHTHALMOLOGY AND SOCIOLOGY

In a suggestive paper[1] Prof. Arnold Loewenstein of Prague, now working at the Tennent Institute of Ophthalmology of Glasgow University, says it is often asked: "how to prevent blindness"; he would rather put the question thus: "how to preserve the eyesight." Everywhere in modern medicine prophylaxis is more highly valued than healing—the path of medical development runs clearly on these lines. Discussing the main causes of blindness, he then suggests means of prevention. It is not easy to prevent hereditary disease or defects. He suggests that districts might have advisory offices for engaged couples, where they could get guidance. He thinks a good film on hereditary diseases might be more interesting than the best detective thriller. With regard to blindness caused by venereal disease the statistics for the whole world prove that this is rapidly decreasing; parental treatment is now well established, and the treatment is distinctly successful. Injuries, especially in industrial countries, are the greatest modern problem; prevention of such damage is not only humane but profitable. Prof. Loewenstein writes: "A great number of the eye injuries in the workshops are due to defective illumination, and at least 15% of all eye injuries are caused by insufficient lighting. One firm installed modern and expensive light fittings and reduced the frequency of the accidents by 7%. Further, industrial efficiency depends upon good vision. Three protective techniques are required: (1) control of toxic materials, gases, dusts, and vapours; (2) use of protective goggles against flying objects and radiant energy; (3) provision of adequate illumination." In his final section he stresses the need for more being done to provide careful teaching of ophthalmology in the medical schools. The nation cannot allow such a training to depend on chance. With a good scheme in operation the nation would soon have a great stock of good eye surgeons to combat blindness and fight the battle for the sight of the rising generation.

PATHOLOGICAL SERVICE OF THE L.C.C.

A series of lectures and demonstrations were given on Dec. 2 at the L.C.C. Group Laboratory at Lambeth Hospital to pathologists and consultants of the Royal Canadian Army Medical Corps and the United States Army Medical Corps. Among the visitors were Col. J. A. Macfarlane and Col. L. C. Montgomery, *M.C.*, respectively consulting surgeon and consulting physician to the Canadian Forces, and Lieut.-Col. M. H. Brown, Assistant Director of Hygiene, Canadian Forces; with the American pathologists was Major Ralph Muckenfuss, now in charge of the U.S.A. General Medical Laboratory "A." The visitors were welcomed by Dr. Andrew Topping, deputy medical officer of health, and in the morning short papers were read by Major J. E. McCartney, R.A.M.C., Drs. Robert Cruickshank, W. W. Kay, and R. F. L. Hewlett. The work of the council's hospital service with 35,000 beds for acute and chronic sick and 30,000 for mental diseases, and of its pathological service with its 28 pathologists and assistant pathologists and 105 laboratory technicians, was described. At lunch the visitors were joined by the clerk of the L.C.C., Mr. E. C. H. Salmon, and the medical officer of health, Dr. W. Allen Daley, both of whom welcomed the guests. In the afternoon the council's pathologists and their staffs demonstrated their work, including culture media, leptospiral and salmonella infections, liver function tests, blast and crush injuries, malignant cells in sputum, sternal puncture, estimation of sulphonamides, Neisseria and haemophilus infections, typing of streptococci, diagnosis of intestinal infections and use of desoxycholate medium, diphtheria diagnosis, antistreptolysin titration, etc. The object of the meeting was not only to demonstrate pathological work in Britain to Canadian and American colleagues but to bring the pathologists together and obtain the understanding and co-operation that can only be acquired by personal contact and discussion. From the remarks of the visitors it was evident the meeting was a great success, and it is to be hoped that this is only the first of its kind between British pathologists and those of the Dominions and our Allies.

[1] *Bulletin of the Czechoslovak Medical Association in Great Britain*, No. 3, 1942.

The Famine Relief Committee (Drayton House, Gordon Street, W.C.1) has issued under the title "Food Conditions in Europe" a leaflet (price 3d.) on the effect of war and blockade on people in German-controlled countries, with a foreword by the Bishop of Chichester. The objects of the committee are to obtain authentic information as to food conditions, and to promote schemes for sending food, vitamins, and medical aid into German-controlled or invaded countries, wherever control is possible in co-operation with existing organizations.

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THE CONTROL OF DIPHTHERIA

One of the best-established facts in applied immunology is the usefulness of antitoxic serum in the treatment of diphtheria. The main, if not the only, reason for failure in certain clinical cases is that serum is not given early enough to be effective. This may be because the patient's relatives summon the doctor too late. Sometimes there is a delay in diagnosis. This is not always the fault of the medical man, for membrane formation in early cases of *gravis* diphtheria may be inconspicuous or absent, leading to a diagnosis of tonsillitis or quinsy. This is particularly unfortunate, because *gravis* and *intermedius* cases sometimes progress rapidly to a fatal end; promptness in giving serum makes all the difference between early recovery and prolonged illness or death.

Modern enzyme-treated sera are of higher unitage per c.cm. and of greater purity than the older unconcentrated and sulphate-precipitated ("concentrated") sera, and larger doses can be given without much risk of serum sickness. There has, however, been no striking improvement in clinical efficacy; indeed, it is sometimes stated that the sera now marketed lack some essential constituent. Although it has been suggested that the newer process of enzyme treatment might eliminate something of value that was formerly retained, the consensus is that these sera are satisfactory.[1] In view of the doubts expressed, however, it is right to ask whether antitoxic serum can be improved and, if so, along what lines. There is evidence that avid sera might be more useful than non-avid, and, although manufacturers may avoid issuing definitely non-avid sera, it is not at present practicable for them to issue sera of uniformly high avidity. Few horses now contain much "natural" antitoxin, and this appears to be correlated with the finding that only a minority produce exceptionally avid antitoxin; these avid sera are blended with many others of average avidity and are then concentrated. If the best sera were excluded from the pool and issued separately their cost would be prohibitive and the level of avidity of all other sera issued commercially would fall.

Is the antigen used for the immunization of horses the best attainable? We know that the content of specific toxin or toxoid in the filtrates commonly injected is higher than it was some years ago, but high potency and specific antigenicity are not necessarily correlated, and competing antigens (broth constituents, etc.) may "crowd out" the required response and affect some quality of the antigen or suppress the formation of some other antibody. Is sufficient attention paid to the "antibacterial" property of serum? Let us admit at the outset that little is known about the use and testing of antibacterial serum, and that even definitions are nebulous, for the word "antibacterial" still provokes discussion among immunologists. The presence of agglutinins and precipitins in a serum might lead some authorities to claim that it is antibacterial, whereas others would restrict the term to serum capable of destroying organisms *in vivo*. Huang[2] of Peking has recently directed attention to an antibacterial property in diphtheria antitoxic serum, which is universally prepared from the Park 8 strain. Organisms of the same serological type as Park 8 disappeared rapidly from the throats of patients during the first two weeks of treatment; organisms of all other types disappeared more slowly. The death rate of patients infected with strains of the same serological type as Park 8, who were of course treated with homologous serum, was not any lower than that of other patients. The author attempts to explain this finding on the basis that practically all the deaths in his series were from laryngeal involvement, and that the antibacterial property of the serum might also be masked by the absence of bacteriaemia, and by the important part the toxin plays in the causation of the disease. There are many other points of interest in Huang's papers which await investigation by other workers. Agglutinins were passively transferred by antitoxic treatment, but these were of the Park 8 serological type, tended to disappear rapidly, and did not interfere with the recognition of agglutinins due to active immunity to the infecting type which developed later. It is not always possible to obtain positive cultures from cases of clinical diphtheria, and Huang records a laryngeal case with only one positive culture during convalescence in which agglutination tests clinched the diagnosis. No agglutinins were found in the acute stage, but the specific agglutinins which appeared during convalescence were of the same type as the organism isolated at this period. Altogether cultures from 268 cases of clinical diphtheria were investigated, among which 8 main serological types of organism were identified. Unlike Okell,[3] Huang could find no evidence for the transformation of virulent into avirulent organisms of the same type in the throat. With the exception of one type, which comprised *gravis* and *intermedius* strains, all of Huang's 8 main types were *mitis*. Thus, *gravis* and *intermedius* types, which are mainly responsible for severe diphtheria in this country, did not come within the scope of Huang's research on antibacterial serum. Be that as it may, we cannot feel confident that this work will have practical clinical application, because it would be necessary to prepare antisera for many serological types of *C. diphtheriae* and have these products available for early use in conjunction with some rapid typing method not yet devised. Again, in the treatment of carriers local chemotherapy should be more generally useful than type-specific serum.

In the safeguarding of contacts Phair and Root[4] recommend simultaneous injection of prophylactic antitoxin and alum-precipitated toxoid. Their work, which was entirely with guinea-pigs, supports the careful studies of Downie and his colleagues[5] on human subjects in this country. Phair[6] also explored the use of an extremely delicate biological method for the further investigation of strains of doubtful virulence. When guinea-pigs were prepared beforehand by a "priming" stimulus, the subcutaneous injection of a minute amount of toxin, toxoid, or culture filtrate of a virulent diphtheria strain led to a definite increase in circulating antitoxin ("secondary stimulus response"). The filtrate of one strain which was regarded as avirulent gave a suggestive increase in titre which may have been due to a minute amount of toxin in the filtrate; in this instance it was impossible to conclude definitely that the strain was really one of low virulence. Another American contribution to the control of diphtheria is the use of chicks in testing for virulence. Frobisher, Parsons, and T'ung[7] injected Plymouth Rock chicks from 7 to 20 days old with 0.5 c.cm. to 1 c.cm. subcutaneous doses of 48-hour broth cultures of strains of *C. diphtheriae* and

[1] *British Medical Journal*, 1942, **1**, 733.
[2] *Amer. J. Hyg.*, 1942, **35**, 317 325.
[3] *J. Hyg.*, Camb., 1930, **29**, 309.
[4] *Amer. J. Hyg.*, 1942, **35**, 377.
[5] *British Medical Journal*, 1941, **2**, 717, 759.
[6] *Amer. J. Hyg.*, 1942, **35**, 386.
[7] Ibid., p. 381.

found excellent agreement (99.7%) with the results previously obtained in rabbits. Perhaps the method might find some application in this country, where the quality of guinea-pigs and other laboratory animals for virulence and other tests is poor; it is unfortunate that there is no national scheme for the large-scale breeding of healthy stocks.

No review of recent work on diphtheria control would be complete without emphasizing the clinical application of laboratory experience of administration of biological products. In treating an acute infection like diphtheria, where time is valuable, the intravenous route has the great advantage that a given dose of serum is made instantly effective, whereas many times this dose injected intramuscularly is followed by a useful blood concentration only after the lapse of some time. Even 48 hours after intramuscular injection the level of demonstrable circulating antitoxin, which is usually the peak level, is only half the concentration attained at the outset by intravenous injection of the same dose. The conclusion of the laboratory worker is that there would be fewer failures in serum therapy if clinicians would decide quickly on the number of units the acute case is likely to require and give as much as possible intravenously. With regard to diphtheria prophylaxis, the first dose should contain a useful amount of antigen; 0.2 c.cm. (10 Lf. units) of the A.P.T. now available in this country would meet this requirement. The second dose may be very small (Glenny[8]) if the first dose has paved the way for a "secondary stimulus response." As only a limited number of persons are sufficiently "primed" by the first dose, it is advisable to give a relatively large second dose—namely, 0.5 c.cm. The interval between doses of A.P.T. should be long, preferably four weeks, a recommendation adopted by the Ministry of Health. A third dose after a long interval, say one year, usually produces an even more rapid and extensive rise in circulating antibody. Indeed, the advantages of periodic restimulation by "re-call" or "boosting" doses should never be overlooked in active immunization, not only against diphtheria but also against other bacterial diseases, such as the enteric fevers and tetanus.

DIETETICS OF PREGNANCY

At a time when millions of the world's adults are concentrating their efforts on killing as many other adults as possible, it is a curious paradox that medical and nutritional attention should be directed more intently than usual to the insistent problem of saving neonatal and infant lives. Yet the comprehensive review by Huggett[9] on the nutrition of the foetus, the subject of "Diet in Pregnancy" chosen by W. C. W. Nixon for the Blair-Bell Memorial Lecture,[10] and recent highly significant "field" experiments all point to an awakened interest in those processes of nutrition that bear on the health of the human organism during the period of six months to twenty months after the act of fertilization. Huggett's survey of the profound and rapid changes that take place during the last three months of gestation makes a sound physiological background for the demand, now almost universally supported, that these months of foetal life should be regarded for rationing purposes as those of an independent organism. The close connexion between diet and the hazards of pregnancy is further emphasized in the recent paper by Nixon, Wright, and Fieller,[11] who find a highly probable correlation between sub-optimal intakes of aneurin and the incidence of oedema and pregnancy toxaemia. A recent study by Williams and Fralin[12] has confirmed for the pregnant women of Philadelphia what Orr, M'Gonigle, and many others have shown for non-pregnant adults in this country and in the U.S.A.—that there is a progressively increasing intake of certain nutrients, specifically those found in the protective foods, as income rises. Their subjects, according to their own statement, failed to demonstrate "any positive relationship between dietary adequacy and the occurrence of certain complications of pregnancy and childbirth"; yet this is not altogether consistent with their observation that "84% of a group who presented a history of nausea and vomiting in early pregnancy had an intake below the pregnancy standard of 600 units of vitamin B_1." It must be noted, moreover, that of their 514 cases only 10 were receiving diets that "could be termed good," so that positive controls were largely lacking in this investigation.

A different and clearer picture is shown by the study made in Toronto by Ebbs, Tisdall, Scott, Moyle, and Bell,[13 14 15] who set out to "determine the effect of poor and good pre-natal diets upon the outcome of pregnancy and condition of infant during the first months of life." The investigation comprised only those patients who had not completed six months of pregnancy, and who agreed to be confined in the Toronto General Hospital. They were divided into three groups. 120 women formed the "poor-diet group." The second group was made up of 90 women "who had been on an equally poor diet as the first group until the 4th or 5th month of pregnancy, and whose diet was then specially supplemented," the fund for this being provided by a Toronto business man. The third group, of 170 women, were found to be on "moderately good" diets, and to have enough money to provide a "good diet" if given advice. The Toronto workers aimed at giving daily the following amounts of essential foods: 40 oz. milk, 1 oz. cheese, 1 egg, "an average serving" of butter and meat, two servings of vegetables in addition to potato, 1 orange or half a grapefruit or 5 oz. of tomato juice, one half of the cereals and bread consumed to be in whole-grain form, and 2 teaspoonfuls of cod-liver oil or equivalent in concentrate; liver once a week; salt to be iodized, and medicinal iron to be used if indicated; 2 tablespoonfuls of wheat-germ daily were also advised. "Past history" showed that those patients on a poor diet had a much higher incidence of previous obstetrical complications than those on a good diet. Some of the end-results of the Toronto experiment were as follows: In the poor-diet group there was threatened miscarriage in 8.4%, in 1.1% of the group receiving a supplementary ration, and in 2.4% of the good-diet group; there was actual miscarriage in 6% on a poor diet, none in the group receiving supplementary ration, and 1.2% in those on the good diet. For the three groups in the same order there was premature birth in 8%, 2.2%, and 3%; stillbirth in 3.4%, 0%, and 0.6%; and toxaemia in 7.6%, 3.4%, and 3%. The average haemoglobin values at term were: in the poor-diet group 11.5 g., in the group receiving supplementary ration 12.1 g., and in the good-diet group 11.9 g. The average birth weight of the babies born to mothers of the poor-diet group, the supplementary group, and the good-diet group, respectively, were 7 lb. 10 oz., 7 lb. 7 oz., and 7 lb. 6½ oz. The authors intend to follow the progress of the babies in these three different groups in

[8] Verbal communication, Section of Comparative Medicine, Royal Society of Medicine, so far unpublished.
[9] *Physiol. Rev.*, 1941, **21**, 438.
[10] *British Medical Journal*, 1941, **2**, 703
[11] *British Medical Journal*, 1942, **1**, 605.
[12] *Amer. J. Obstet. Gynec.*, 1942, **43**, 1.
[13] *J. Nutrit.*, 1941, **22**, 515.
[14] *Canad. med. Ass. J.*, 1942, **46**, 1.
[15] Ibid., p. 6.

order to determine whether the pre-natal diet has any effect on their development. They give a brief summary of their observation on the first 250 babies up to the age of 6 months. Breast-feeding whilst in hospital was carried out by 81% in the poor-diet group, 95% in the supplementary diet group, and 88% in the good-diet group; 6 weeks after birth these figures had changed to 59, 86, and 71 respectively. In the first 6 months 3 babies from the poor-diet group had died, and none had died in the other two. In the poor-diet group 21% had frequent colds, the percentage being 4.7 in each of the other two; the corresponding figures for pneumonia were 5.5, 0.5, and 0.9. Rickets was observed in 5.5% of the infants in the poor-diet group, none of the supplementary diet group, and 0.9% of the good-diet group. Anaemia was present in 25% of the poor-diet group, 9.4% of the supplementary diet group, and 17.1% of the good-diet group. The authors' conclusion that mothers on a good or supplemented diet had better health and fewer complications and were better obstetrical risks than those left on the poor pre-natal diets seems to be fully justified, as does their observation that the health of infants was poorer in the poor-diet group. They observe that "in a large proportion one could tell the diet group of the mother by looking at her baby."

The Toronto experiment receives support from the results of an investigation carried out under the auspices of the People's League of Health[16] from March, 1938, to the end of 1939. The matter investigated was the effect on the course of pregnancy and labour and on the newborn child of a vitamin and mineral supplement to the daily diet. Out of 5,022 women, 1,000 gave a record of food normally eaten in one week. From this evidence it appeared that 70% were not taking enough calcium and 98% not enough iron. Vitamin A deficiency was common, and some 50% were not taking enough vitamin C. The women were given supplements of iron, calcium, iodine, manganese, and copper, and of vitamins A, B complex, C, and D. The toxaemia rate among 1,530 primigravidae on the supplemented diet was 27.1%, as against 31.7% among 1,512 primigravidae in a control group. On this basis, and with an average of 600,000 births yearly in England and Wales, the saving of 10,000 cases of toxaemia could be effected yearly by dietetic means alone. It was also found that premature birth was less frequent among primigravidae on the supplemented diet than in the control group.

Many of those who are interested in these problems—and probably some who have taken part in the work outlined above—will doubtless be present at a symposium that bears very closely on the matter and is being arranged by the Nutrition Society on "Diet in Pregnancy" for an early date in the New Year, when we may expect further light to be shed on some of the many still obscure points.

INFLUENZA PREVENTION

If the concerted attack now being made on air as a vehicle of infection succeeds in its aim, perhaps the greatest benefit achieved will be the prevention of acute catarrhal infections of the air passages. Although other air-borne infections may be more serious, none causes more inconvenience and disability, for no other produces illness on such a scale or recurs with such frequency. That some of the methods recently evolved can actually disinfect an atmosphere laden with the virus of influenza and so prevent its spread is proved by the experiments of J. Stokes and W. Henle.[17] These were conducted in an infants' ward divided into sixteen cubicles, where the patients were replaced by mice. Suspensions of highly mouse-virulent influenza A virus were atomized in this room, and in a control experiment every one of 70 mice exposed in different parts of the ward died with influenzal lesions. Atomization of virus was carried out for the same period with ultra-violet light irradiating the whole of the upper air of the ward and directed as a barrier across the entrance to each cubicle: the only mice dying in this experiment were three of those in the cubicle containing the atomizer, some of the mice in adjoining cubicles having non-fatal influenzal lung lesions. In a third experiment propylene glycol was vaporized to give an air concentration of between 1 in 2,000,000 and 1 in 4,000,000: all the mice survived, and only 3 which had been in the same cubicle as the atomizer showed influenzal lesions when killed. Although it is well recognized that ultra-violet light will destroy influenza virus, this is the first evidence, so far as we know, that propylene glycol will do so, and the evidence has been obtained in a highly significant form, under conditions which enable this conclusion to be translated directly into practice. The authors have also been able to test the efficacy of propylene glycol in practice: a concentration of about 1 in 30,000,000 was maintained in the air of a children's ward for seven weeks in mid-winter, and during this time the incidence of respiratory infections fell almost to *nil*. It should be recollected that propylene glycol vapour is imperceptible and presumably quite harmless, since the liquid itself can be swallowed in quantity without ill effects. The very encouraging observations reported by these authors include an experiment in which human volunteers, some of whom had been given influenza virus vaccine, inhaled through aviation oxygen masks an atomized suspension of influenza virus recently isolated from a fatal case. Of the controls 35% and of the vaccinated only 3% developed clinical influenza. The longest interval between vaccination and exposure was only 18 weeks, and this may perhaps explain the efficacy of the protection afforded; the balance of evidence, as we pointed out recently,[18] is unfavourable to this method. Of the three proceedings studied, aerial disinfection by means of propylene glycol appears to be the simplest and perhaps the most successful; unless it should prove to have unexpected drawbacks it should have a wide field of application, particularly in hospitals and possibly elsewhere.

LYMPHOPATHIA VENEREUM

The diagnosis of this disease, often known in this country as lymphogranuloma inguinale (synonyms—climatic bubo, poradenitis, Nicholas-Favre disease), presents considerable difficulties, because the initial lesion is evanescent and, in fact, usually overlooked, while inguinal adenitis may be due to a variety of conditions. There can be little doubt that lymphopathia venereum is far commoner than has been realized, more especially in tropical and sub-tropical countries and in parts of the U.S.A., where it is particularly frequent among negroes. Hitherto most venereologists have relied on the intracutaneous test of Frei[19]: Frei's antigen, made from human bubo pus, has proved highly specific, but the supply, for obvious reasons, is difficult to obtain and maintain. Recently antigens have been made from the brains of infected mice, but these have not proved entirely satisfactory. More recently still it has been found that the virus of lymphopathia venereum can be grown on the chorio-allantoic membrane of the developing chick embryo, and from this source an antigen known as "lygranum" has been obtained which is free from many of the objections raised against the other two.

[16] *British Medical Journal*, 1942, **2**, 77.
[17] *J. Amer. med. Ass.*, 1942, **120**, 16.
[18] *British Medical Journal*, 1942, **2**, 547.
[19] *Klin. Wschr.*, 1925, **4**, 2148.

Lygranum is essentially a saline suspension rich in virus elementary bodies prepared from chick embryos; it is freed from most of the tissue constituents by differential centrifugation and is formalinized to inactivate the virus. It can be used either for the skin test or for serum complement-fixation. For use in both it is standardized by dilution to a strength which is found to give a positive reaction in known cases of lymphopathia venereum and a negative one in normal persons. Control material is prepared from normal chick embryos. The skin test is performed by injecting 0.1 c.cm. of lygranum into the skin. Readings are taken at 48 and 72 hours, and, if necessary, again at the end of a week; a positive result is indicated by a papule not less than 7×7 mm., and a negative by one less than 5×5 mm. A papule intermediate between these two is considered doubtfully positive. Shaffer, Rake, and Grace,[20] and Axelrod[21] found lygranum to be both highly sensitive and specific for skin tests; it was at least equal to human pus antigen and superior to that prepared from infected mouse-brain.

Results with the three forms of antigen were as follows: In 106 persons diagnosed as having lymphopathia venereum lygranum gave 96 positive, 3 doubtful, and 7 negative results; with mouse-brain antigen there were 78 positive, 9 doubtful, and 19 negative reactions. In 42 of the above cases human pus antigen gave 38 positive, 1 doubtful, and 3 negative reactions. Shaffer and his colleagues also found lygranum to be most satisfactory in the complement-fixation test; in 115 persons diagnosed as having lymphopathia venereum the sera of 113 gave definite positive reactions; the two failures occurred in cases of rectal stricture which were also Frei-negative. The interesting observation is made that skin sensitivity often disappears after sulphanilamide therapy and that apparently the disease is not passed from mother to child *in utero*. Another interesting observation is that in 70 persons, either normal or suffering from diseases other than venereal, positive results were obtained by complement-fixation tests in 6 and negative ones in 64, while of 60 persons suffering from venereal disease 31 gave positive and 29 negative results. From this it is concluded that infection with the virus of lymphopathia venereum is often acquired at the same time as other forms of venereal disease.

There can be little doubt that lygranum possesses many advantages over other forms of antigen for skin tests. It is both highly sensitive and specific; it is obtainable in bulk and is not dependent on supplies of human pus; moreover, it constitutes an antigen for use in skin and complement-fixation tests more efficient than any hitherto produced. The intravenous use of chick-embryo antigen is said to give unsatisfactory results as compared with mouse-brain antigen,[22] but few venereologists employ this route.

[20] *Amer. J. Syph.*, 1942, **26**, 271.
[21] Ibid., p. 474.
[22] *Arch. Derm. Syph.*, Chicago, 1942, **45**. 953.

SUPPLIES FOR PATHOLOGICAL LABORATORIES

One of the many ways in which the health services of the London County Council are assisting the war effort is the subject of a recent report. The comprehensive pathological service provided by the L.C.C. for several years past has greatly extended since the war began and has become the basis of a national system for the supply of material essential to the maintenance of the laboratories of the Ministry of Health and of the Army. The Council quite early adopted a centralized system for the purchase of laboratory requisites and the manufacture of culture media, vaccines, stains, and so on. The laboratory materials are prepared at a "media establishment" attached to one of the group laboratories, with branch accommodation at a mental hospital. In the early part of the war, when the Ministry of Health found it difficult, if not impossible, to meet the needs of the new laboratories in connexion with the Emergency Hospital Service and general public health investigations, the L.C.C. agreed to supply all the emergency laboratories in the London region with culture media and other materials. Recently the Ministry asked the Council to extend the provision to the whole of the Ministry's laboratories which have been set up in the Provinces, and this has been done. Some years ago the Army authorities adopted the L.C.C.'s system of supplying media in screw-capped bottles for use in the event of hostilities, and on the outbreak of war it seemed to all concerned that the simplest and most economical method of obtaining Army culture media would be to use the resources of the L.C.C., which had the plant, the trained personnel, and stocks of material available. The request of the War Office was acceded to, and Dr. J. E. McCartney, director of the Council's group laboratory, who had been mobilized in the Territorial Army with the rank of major, R.A.M.C., and appointed officer commanding media manufacturing centre for the British Army, was allowed to remain attached to the group laboratory, undertaking not only his peacetime work but the large extensions which have since occurred. It is estimated that the additional requirements (which include the supply of culture media from the Council's resources to allied nations) will be equal to 75% of the total quantity produced. All this is in addition to other special work of national importance undertaken at the group laboratory and the antitoxin establishment, such as the supply of certain antitoxins and measles serum to local authorities in some reception areas, diphtheria prophylactics to metropolitan borough councils, and a large quantity of tetanus antitoxin to the Medical Research Council for a national pool. Gas-gangrene antitoxin has also been prepared in case of need.

LUNG-DUSTING EXPERIMENTS

Barclay, Franklin, and Macbeth have already reported[1,2] on *x*-ray studies of excretion of dusts from the lungs. In a more recent paper[3] Barclay, Franklin, and Prichard describe further experiments which correct an erroneous conclusion previously formed, and increase our knowledge of dust inhalation and excretion, phenomena of importance to both clinician and industrial hygienist. Cats were used, and both insufflation and inhalation methods were carried out. Various dusts opaque to *x* rays were employed, from finely powdered lead glass with particles up to 45 μ in size to uncompressed gas-flame carbon with particles about 0.5 μ in size. Control radiographs were taken before and immediately after the dustings. The lungs and trachea were immediately excised and *x*-rayed, and additional radiographs were taken after fixation of the lungs and the removal of portions for histological examination. In discussing their results the authors consider certain points established beyond dispute. In all the subjects there was some introduced dust in the alveoli; this corrects an earlier conclusion when delayed histological examinations gave negative results. Although the amount of alveolar dusting varied greatly from subject to subject, it was never so great as to be detectable with certainty in the radiographs, even of excised lungs. This was in strong contrast to the obvious bronchiolar dusting. Finally, the amount of alveolar dusting did not run parallel with the amount of bronchiolar

[1] *Amer. J. Roentgen.*, 1938, **39**, 673.
[2] *Brit. J. Radiol.*, 1938, **11**, 405.
[3] *Amer. J. Roentgen.*, 1942, **47**, 362.

dusting as seen on histological examination. Almost identical quantities of a particular dust could be present in the alveoli of two subjects, while the bronchioles and bronchi of one were loaded and of the other practically clear. Therefore the condition of the tubular system, readily assessed when radio-opaque dusts are used, is no guide to the alveolar condition in any particular case. These observations indicate the apparent existence of a defence mechanism preventing the entry of large quantities of dust into the alveoli. The experiments suggested, but did not prove, that the average amount of dust entering the alveoli is the same in insufflation and in quiet and gasping respiration. Apparently, also, introduced dusts collected in relatively greater amount in inflamed areas of the lung. This has a highly important bearing on problems of industrial pulmonary disease.

In healthy subjects the total elimination of small amounts of dust from the alveoli can be a rapid process (Seemann,[4] Carleton[5]). Barclay, Franklin, and Prichard found that in some cases the alveolar dust-cells were found to have ingested dust particles within a few minutes of their penetration into the alveoli. They found no evidence of dust deposition in the bronchial lymph glands. It appeared that normally the loaded alveolar cells moved towards the ciliated epithelium of the bronchioles, were caught up on the layer of viscid mucus, and carried up with it by the action of the cilia. The dust is thus brought back to the pharynx. When the insufflated dusts were washed down into the alveoli by subsequent intratracheal injections of a few c.cm. of fluid the excretion of dusts from them was very much delayed. In this case the delay was presumably due to overwhelming of the protective mechanism by the actual quantity of dust carried down by fluid. In man, chronic irritation of the air passages leads to replacement of the ciliated epithelium by cells of the goblet type, and in addition there is a greatly increased production of mucus by the buried glands. Thus the above excretory mechanism would be interfered with in two ways, and coughing becomes necessary to clear the bronchial tree. This explanation throws much light on the effects of upper respiratory infection on the lungs—effects commonly observed by the clinician. Finally, it will not be without interest to refer here to some recent experiments of Campbell.[6] He showed that in mice the inhalation of a precipitated silica produced nodules in the tracheo-bronchial glands in 50% of the animals. These nodules resembled the classical fibrotic silica nodule in man. The nodules were, however, not produced in the lungs of the mice, and this was considered to be due to the fact that most of the dust had been removed to the lymph glands and the degree of dusting was not enough to affect the lungs also. These results gave support to the specificity theory for silicosis.

THE CAUSES OF INFANTILE MORTALITY

As C. McNeil pointed out recently in these columns[7] the infantile death rate in Great Britain is still nearly twice as high as in certain other countries—notably Holland and New Zealand. The first step towards a reduction is a clear understanding of the cause, and paediatricians have long been dissatisfied with statistics based upon death certification. In 1939 a study was undertaken in Newcastle-upon-Tyne, and an investigator[8] with modern clinical experience of disease in infancy made a personal and detailed inquiry into the circumstances of the death of every child below the age of 1 year. In this investigation J. C. Spence and F. J .W. Miller secured the co-operation of practitioners who were ready and anxious to impart full information—information which showed that in one-third of the cases the recorded cause of death gave an inaccurate or inadequate description of the actual cause. An arrangement was made whereby the name and address of each child dying in the first year of life and the name of the doctor signing the certificate were sent to the investigators within twenty-four hours of the registration of the death. Contact was made at once with the doctor, the object of the investigation explained, and a personal interview arranged at which the history of the final illness and the events leading up to it were discussed and recorded on a special form. Wherever possible, additional information was obtained from antenatal records, infant welfare charts, hospital notes, and, in about 20% of cases, by the result of a post-mortem examination. Altogether 272 deaths were investigated, and in 231 it was possible to express an opinion upon the cause of death. In the neonatal period the most important causes were prematurity (47 cases), birth-death (infants so subjected to adverse conditions during birth that they failed to survive—38 cases), and neonatal infection (15 cases), though it is thought that the actual incidence of neonatal infection was greater than the apparent. Actually, if the accepted standard of 5½ lb. or less birth weight for prematurity is taken, there were 78 deaths, or more than a quarter of all the infant deaths. In the period after the first month the chief causes of death were infective conditions, which caused death in 90 out of 112 cases in which an opinion could be given. It was not possible to assess with accuracy the exact type of infection responsible for death in every case, and there is clearly great scope here for future and valuable research. Roughly, three groups were recognized: illnesses with respiratory symptoms 33 cases, with alimentary symptoms 12 cases, and infections of unknown origin 32 cases. The relatively small number of infant deaths directly attributable to gastro-enteritis may be surprising to those accustomed to assume that diarrhoea and vomiting mean primary infection of the alimentary tract. That infection of the respiratory tract is nowadays—i.e., with the disappearance of "summer diarrhoea"—the more serious problem needs repeated emphasis, but this must not detract from the fact that, in the opinion of the Newcastle investigators, an increased incidence of breast-feeding would assist materially in a reduction in the number of infant deaths. Only 17 out of 98 infants dying from infections of various types had been breast-fed until 6 months of age or to the time of death.

Although Spence and Miller apologize in their conclusion for failing to find the predisposing and immediate cause of death in a large group of their cases, they have performed a most valuable task in providing exact knowledge upon which to base future work. It is clear that the problem of deaths in the first month of life is quite different from that after the first month, but at both periods it is essential to get rid of what they term "a spirit of resignation" towards the whole problem of infantile mortality. A conscious and united effort on the part of medical practitioners, medical officers of health, and hospitals working in conjunction with trained paediatricians would go far to achieve those lower rates in other countries which C. McNeil has pictured as a goal for preventive paediatrics in its future development.

[4] *Histobiologie der Lungenalveole*, 1931, Jena.
[5] *Proc. roy. Soc.*, B, 1934, **114**, 513.
[6] *Brit. J. exp. Path.*, 1941, **22**, 76.
[7] *British Medical Journal*, 1942, **1**, 429.
[8] See *Report of an Investigation into the Causes of Infantile Mortality in Newcastle-upon-Tyne*, 1939. Published by the City and County of Newcastle-upon-Tyne.

Nova et Vetera

NICHOLAS ALCOCKE, SURGEON TO HENRY VIII AND EDWARD VI

I should assume that Nicholas Alcocke was born about the year 1500. The first notice that we have of him at Barbers' Hall is his admission to the Freedom of the Company in 1523. The usual period of apprenticeship was seven years, and the apprentice was generally between 14 and 16 years of age at the date of the signing of his indentures. It is rather an odd thing that Alcocke seems to have taken no further interest in the company after his admission to the freedom. He never served the office of Warden. He appears in the Holbein picture and is one of the kneeling figures, being placed immediately behind Pen and in front of Ferris. As he was not holding office in the company at that time I assume that he owed his inclusion to the fact that he was one of Henry the Eighth's surgeons. This indicates that the picture was painted after the year 1539, for his warrant of payment as King's surgeon is dated in that year, as I shall presently show.

Sir D'Arcy Power, in *The Craft of Surgery*, says that the picture was probably painted in 1542. Vicary, who is receiving the deed, was Master in that year, and the fact is noted that Holbein died of the plague in 1543. Only two of the figures standing to the left of the King can be identified. They are William Tilley, who was Middle Warden in 1540, and Christopher Salmon, who was Junior Warden in 1543. It should be remembered that the elections to office at the Hall were made in the late summer of each year.

To return to Alcocke's warrant. This ran: "Nicholas Alcoke, Surgeon, by the Kingis warraunt dated XX day of November anno XXXJ (1539) for the yerely payment to him of X li. by yere, quarterly by even porcions from Mychaelmas dicto anno XXXJ during his lyf; the somm of L s. for one quarter fully ronne ultimo Decembris dicto anno XXXJ." Payments of fifty shillings a quarter are recorded in the public records during the years 1540, 1541, 1543, 1544, and 1547.

In 1542 Alcocke had a grant in fee, as one of the King's surgeons, for £173 5s. of the Rectory of Kirby, Lincs (late Elsham priory), with tithe-barn and stable, in the tenure of William Turwytt; also the advowson of Kirby. This grant is dated 5 May 34, Henry VIII. In 1544, in a list of retinues for France, Alcocke is allowed one billman; and in the same year is an order to pay Nicholas Alcocke 2s. a day from July 1 and sixpence for two servants, for the war. In 1545 he was granted the lease of a tenement at Freshe Wharffe, in St. Botolph, Billingsgate (late St. Mary Graces). This is dated May 25. In the same year he had a licence to export 300 cloths, "unbartred, unwrought and unshorn," dated October 18; and on February 20, 1545/46, he was appointed Bailiff and collector of rents of Merevale, Mon. He also asks for leave for Arnolde Kyrkman of Cologne to bring into England an English version of *Magnus Herbarius*. Between 1547 and 1551, in *Early Chancery Proceedings* is the record of "the case of Nicholas Alcocke *versus* Thomas Pyke, of London, Skinner, *re* a messuage in Freshe Wharfe, late of St. Mary Graces." As Alcocke dealt with this property in his will I suppose that he proved his title.

According to Young, in the *Annals of the Barber-Surgeons' Company*, Alcocke died in 1550. Young gives a very good abstract of his will, which was dated 15 Feb., 1549/50, and proved 6 May, 1550. Alcocke desired to be buried in St. Stephen, Coleman Street, near the graves of his children. He bequeathed his goods in three parts: one part for the purposes of his will; one part for his wife, Margaret; and one part for his daughter, Elizabeth, when she should reach the age of 21 or be married. This custom of tripartite division into wife's part, bairns' part, and the dead's part is a very ancient one. A celebrated example can be found in the works of the Venerable Bede.

Alcocke ordered six sermons to be preached at St. Stephen, Coleman Street, and left to the poor of Swyneshed, Lincs, £5; for poor maids' marriages, £4; to St. Bartholomew's Hospital, £2; to George Brykesworth, of Glastonbury, Surgeon, his best lute; and to his daughter, Elizabeth, his virginalls. He left clothes, boots, and "a paire of spurres" to his servant, Richard Sygans, and a bedstead, mattress, and coverlet to his maidservant, Ann. To Robert Balthrope,* "late my apprentice, my booke *Guido*, in Englysshe." There are bequests of pewter dishes and saucers to his godchildren, the daughters of Robert Wilson and John Stocks; "to John Mason, late my apprentice, Lanfrank, John Arden, an other olde booke with a bare woodden cover in Englysshe and the practice of Ypocrates." To his wife's father, Thomas Turnor, various clothes, and a similar bequest to the eldest son, his brother-in-law. To Robert Balthrope my "Russett woorsted gowne faced with calaber and garded with velvett." The great house called "ffreshe Wharff," of annual value £24, to his daughter. If she died before coming of age this wharf to be sold and divided in certain proportions between St. Bartholomew's Hospital, his father-in-law, Thomas Turnor, and Richard his son, the poor of Coleman Street, poor maids' marriages, and the mending of highways. He left certain pastures and meadows at Enfield to his wife; Kirby parsonage with tithes and profits to be sold and 100 marks given to Roger Alcocke, his brother's son; 20 marks to godson Nicholas Spencer, and the residue in works of charity at the discretion of his executors, Thomas Archer, gentleman, and Randolph Atkinson, Merchant-Taylor. He made John Wysdome, Painter-Staynor, and John Shireff, Barber-Surgeon, overseers of his will. On consulting the will of Robert Balthrop, which is also given in Young's *Annals*, I find that "*Guido* in Englysshe" was left to his former servant (i.e., apprentice) John Edwards, but I cannot trace the "Russett gowne"; perhaps it was worn out. The calaber with which it was faced was probably squirrel's fur. Bequests of wearing apparel of this sort are very common in mediaeval wills. It must be remembered that the clothing of the upper classes at this date was costly. The gown of a gentleman was a voluminous affair, and would take several yards of cloth in the making, not to mention the fur.

R. R. J.

CURIOSITIES OF CAESAREAN SECTION

I have come across an account of a remarkable case of Caesarean section performed some 150 years ago, which I think will be of interest to your readers.

It is related by Mr. Duncan Stewart, surgeon, in Dungannon, who saw the patient some days after the operation; and the account is confirmed by Dr. Gabriel King of Armagh, who says that he drew out the needles which the midwife had left to keep the lips of the wound together. The patient's name was Alice O'Neil, and the operator was an illiterate midwife, one Mary Dunally; the instrument used was a razor, with which she first cut through the containing parts of the abdomen, and then the uterus. "She held the lips of the wound together with her hand, till someone went a mile and returned with silk and the common needles which tailors use; with these she joined the lips in the manner of the stitch employed ordinarily for the hare-lip, and dressed the wound with whites of eggs." The woman recovered in twenty-seven days.

It is also of interest to note that at this time foreign jurists doubted whether a child extricated by the Caesarean operation was properly born or capable of succession. "Illud autem valde controversum est inter jurisconsultos, an is qui editus est execto matris ventre reputetur partus naturalis et legitimus et successionis capex" (*Caranza de partu naturli et legitimo* p. 427).

Shakespeare, in *Macbeth* (Act IV, Scene 1), utilizes this quibble in an ingenious form:

> *Second App.:* Macbeth! Macbeth! Macbeth! . . .
> Be bloody, bold, and resolute; laugh to scorn
> The power of man, for none of woman born
> Shall harm Macbeth.

And again, in Act V, Scene 8:

> *Macduff:* And let the angel whom thou still hast serv'd
> Tell thee, Macduff was from his mother's womb
> Untimely ripp'd.

The child born by the Caesarean operation, I need hardly say, does not suffer any legal disabilities.

Hove. L. A. PARRY, M.D., F.R.C.S.

*Later Serjeant-Surgeon.

Correspondence

Notification of Venereal Disease

SIR,—I agree with Dr. Edith Summerskill that Defence Regulation 33B is a great disappointment. Frankly, it appears to me that the Ministry of Health has "missed the bus." Here was an opportunity to deal with the problem of venereal diseases in a comprehensive way, and instead we get a miserable regulation that will result in the rounding up of a prostitute here and there. Perhaps now and again a couple of soldiers may be found who are willing to testify to infection from the same source—a man loses his individuality in the Army—but it is most exceptional to find two civilians who are able or willing to do so. As regards civil life, therefore, in my experience the regulation will remain a dead letter.

I am not, however, prepared to go the whole way with Dr. Summerskill in advocating compulsory notification of all venereal disease. The risk that it would result in concealment is too great. In my humble opinion what is needed is a limited form of notification. Congenital syphilis should be notifiable, just as ophthalmia neonatorum is, and the parents as well as the child should be compelled to have treatment. It is a duty we owe to the children and to the nation. Ophthalmia neonatorum is already notifiable, but the parents are not compelled to have treatment. The public would be horrified if it knew how many syphilitic children are born every year, and what a large proportion of these receive no treatment until various disabilities, many of them developing at school age, affect them. But prevention is better than cure, and I am heartily in agreement with Dr. Summerskill when she advocates a compulsory blood test for all pregnant women. For years now I have advocated that this should be carried out in the maternity and welfare clinics of our local authority. I have no hesitation in saying that congenital syphilis can be reduced to negligible proportions if a blood test, followed by treatment in positive cases, is carried out. "If preventable, why not prevented?" At my ante-natal session blood is taken as a matter of course, and no questions asked.

To come back to notification, a doctor who undertakes the treatment of venereal diseases in an official capacity should have the power to report the case to the medical officer of health only if the patient refuses to continue treatment while still infectious. Simply to render it an offence not to obtain treatment, as suggested by one speaker in the House of Commons, would not meet the case. Nowadays people, even prostitutes, come up for treatment and are extremely anxious to receive it. The trouble is that, having obtained a certain measure of relief, a large proportion default while still infectious, and no almoners, no personal appeals, and no reminders by post have any effect whatever. It is these callous and selfish people who go around spreading infection that we want to get at.—I am, etc.,

Treatment Centre, Royal Infirmary, Sunderland. NOEL F. ROWSTRON.

Paying for V.D. Treatment in Mental Hospital

SIR,—A patient of mine with central nervous system symptoms and a positive Wassermann reaction was referred by me for treatment to a clinic for venereal diseases under the local authority. While undergoing treatment there he was, by arrangement with the M.O. in charge and on his advice, referred to a mental hospital for malarial therapy. In this area—and probably in others—assessments for mental hospital treatment are made by the public assistance committee and not by the health committee of the local authority. In due course this patient received an account for his stay in the mental hospital. He has drawn my attention to the well-known proviso that treatment for venereal diseases is widely advertised as free and confidential. The resulting dilemma would appear to be in such cases that if a patient resists the demand for payment by claiming that his treatment should be "free," then *ipso facto* he has to divulge to a lay assessment committee the nature of his complaint. If, on the other hand, he "pays up" to avoid disclosure and trouble, then the provisions of the free treatment promised are not fulfilled.

The dilemma is not quite as simple of solution as might be imagined. It is obvious that many of the patients of public mental institutions are there because of tertiary syphilis, and local authorities may be reluctant to forgo the right they claim to make assessments in cases like that outlined above because of the far-reaching implications, especially as regards expense. In short, I ask those more in a position to know, What is the general policy pursued by local authorities about the treatment in mental institutions of tertiary syphilis as regards its "free and confidential" aspects?—I am, etc.,

Southampton. GEOFFREY H. BARENDT.

Myasthenia Gravis

SIR,—The article on drugs for myasthenia gravis (Dec. 19, p. 730) prompts me to record the following case. In June, 1935, I was asked to see a dental surgeon, male, aged 50 years, who complained that recently he had experienced increasing difficulty in masticating and swallowing solid food. Examination elicited the fact that there had been during previous months some loss of muscular power generally, ptosis, weakness of the orbicularis and soft palate, with tendency to nasal regurgitation of food. Exercise resulted in undue fatigue. He was, in fact, a typical case of early myasthenia gravis.

He was at once put on to injections of prostigmin commencing with ♏ 5 t.d.s. together with ephedrine by the mouth. This treatment was continued for some months, but in spite of increased doses of prostigmin up to ♏ 20 t.d.s. the patient's condition rapidly deteriorated. Muscle weakness increased until he was unable to stand for any length of time. He was unable to hold his head up, and the typical attitude adopted was to sit, resting his elbows on a table and supporting his chin in his cupped hands. Ptosis became very pronounced and no solid food could be taken. Everything had to be fluid or semi-solid or minced. Throughout the whole time there was no muscle wasting. He had become dull and apathetic, taking little interest in things generally. By this time he had been obliged to give up practice completely. The prostigmin and ephedrine had no effect whatever on the progress of the disease. The only advantage had been that, if administered about half an hour before meals, there was a temporary muscle stimulation or recovery sufficient to enable him to deal with his food rather more satisfactorily than otherwise. Urine examination showed the creatinine output to be very low, approximately 0.15 g. per diem.

Some three months after the above treatment was started the possibility of glycine (amino-acetic acid) being of benefit was considered. Treatment with ℈ss doses t.d.s. was begun with startling and spectacular results. There was an almost immediate improvement. Within a very few weeks my patient was able to masticate his food much more easily. The ptosis improved, as also did the neck muscles; in fact there was a steady improvement in every direction. He began to take more interest in life, urine examinations at intervals revealed a steady increase in the creatinine output until the normal of about 1.2 g. daily was reached. The dosage mentioned above was maintained for about 1½ years, by which time he had made such considerable improvement that he was able to take a substantial share in the conduct of his practice. The dose of glycine was then gradually reduced, a careful watch on the creatinine output being kept to ensure that it did not fall below normal. At the slightest sign of such a fall the dose was increased accordingly. All went well until, early in 1938, the patient began to show symptoms of bladder disease—i.e., frequency, haematuria, etc. An investigation showed the presence of a papillomatosis of the bladder, from which he died a few months later.

Myasthenia gravis is generally regarded as a disease of the central nervous system, although no definite recognizable lesions have been noted in the brain or spinal cord. My observations from this case suggest that the disease is rather a condition brought about by some alteration in the body metabolic process, which results either in the storing up of creatinine, possibly in the muscle tissues, where it acts as a muscle poison, or in a decreased creatinine (or creatine) metabolism resulting in the muscles being deprived of the element required to stimulate

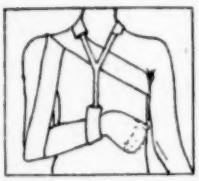
contraction. My grateful thanks are due to the British Drug Houses Ltd., who generously provided the glycine required throughout the whole period of treatment.—I am, etc.,

London, N.22. S. CHAPLIN.

Treatment of Dislocated Acromio-clavicular Joint

SIR,—Necessity is often the mother of innovation as well as invention, and especially is this so in the realms of medicine and surgery when a new use is found for an old appliance. The treatment of the dislocated acromio-clavicular joint with its associated tearing of ligaments is notoriously difficult, and one occasionally sees considerable disability due to an old injury of this type. These injuries, if recent, are now being treated by a new method in the orthopaedic department of this hospital.

It was decided that any form of treatment which did not obtain and maintain constant full reduction should be discarded. The following lines of treatment, though standard, were weighed in the balance and found wanting: (1) Adhesive strapping of various types, including "elastoplast" extension strapping applied as recommended by Watson-Jones, in conjunction with a sling. Even if several layers thick, this works loose and needs renewing—i.e., reduction is not constant. (2) Tight flannel bandages extending under the elbow, over the shoulder, and round the opposite axilla. (3) Tight "cellona" bandages applied in the place of the flannel.



Constant full reduction *can* be obtained and maintained for a considerable period of time without readjusting by using an Esmarck tourniquet as a bandage, in conjunction with a sling. This method gives and maintains full reduction and a perfect functional result, and would justify more widespread use.—I am, etc.,

V. F. MASTERS,
Berkhamsted. Orthopaedic Registrar, Ashridge Hospital.

Fulminating Purpura and Adrenal Haemorrhage

SIR,—The following history of a case of fulminating purpura and adrenal haemorrhage, occurring in a remote settlement in North-Western Canada, may be of interest.

The child, a healthy half-breed Indian boy of 23 months, was well until the day of death, Jan. 20, 1933. He suddenly became pale, and his mother noticed a rash developing on his face and arms. Shortly afterwards he went into convulsions, and was dead before a dog team could be harnessed to come to get me. The time from the onset of symptoms till death was less than three hours.

I obtained permission to do a necropsy but not to open the skull. The body was well developed and weighed 27 lb. There were scattered purpuric spots all over the skin, particularly marked on the head and arms. There was no excess of fluid in pleurae, pericardium, or peritoneum. The heart appeared normal. There was slight bronchitis, but no consolidation in the lungs. The stomach and intestines were empty, and there was no evidence of inflammation. The liver and spleen appeared normal. The thymus was not abnormally large, and there was no excess of lymphoid tissue. The kidneys were pale. The suprarenal glands were both deep red and necrotic.

This would appear to have been a case of Waterhouse-Friderichsen syndrome. My reason for reporting it after this lapse of time is that Dr. I. S. Fox in your issue of Aug. 22, 1942, and also Dr. James Hughes in the *Journal* of Sept. 14, 1940, state that this syndrome is usually associated with infection by the meningococcus. It seems extremely unlikely that the meningococcus could have been concerned in this case, for the following reasons.

In a remote and sparsely settled district such as this, it is possible to know with certainty who has been in contact with a patient. The case described occurred in one of four houses separated by 25 miles of forest from the small settlement at Keg River, and by 200 miles from the nearest railroad or large village. I made careful inquiries at the time into possible sources of infection, as I thought I might be dealing with a fulminating case of haemorrhagic measles, scarlet fever, or small-pox. There was no other illness whatever in the same household, none in either of the three houses near by. The only infection prevalent at Keg River was a mild type of influenza, and there had been no recent contact between these cases and the household concerned. It is impossible for a stranger to pass through unnoticed, or unremembered, in a place like this. Air-borne or insect-borne infection can also be safely ruled out where the distance is so great and the temperature 40° below zero.

I can offer no suggestion as to any possible source of infection. It is difficult to imagine that an organism of sufficient virulence to cause a fulminating bacteriaemia could have shown so little sign of its presence in any other member of this tiny community.—I am, etc.,

MARY PERCY JACKSON,
Keg River, Alberta. M.B., Ch.B., M.R.C.S., L.R.C.P.

Haemorrhagic Measles

SIR,—Dr. J. J. Linehan's interesting account of a case of haemorrhagic measles (Dec. 19, p. 725) prompts me to report a somewhat similar case.

A healthy girl of 6 years developed coryzal symptoms on March 21 and a morbilliform rash on March 23. On March 29, after the rash had faded and the symptoms had abated, the temperature rose suddenly and a purpuric eruption appeared on the face. Next day she was admitted to Kendray Isolation Hospital, Barnsley, with large haemorrhagic areas covering most of the face and patches of ecchymoses on the left arm and left thigh. The mucous membranes were not affected: the spleen was not enlarged; there were no joint pains; the temperature was 102° F., with pulse and respiration proportionately increased: scanty albumin was the only abnormal constituent of the urine; blood examination revealed a leucocytosis of 27,300 per c.mm. (polymorphs 80%) but no abnormality of platelets, red cells, or haemoglobin.

For some 48 hours after admission to hospital fresh haemorrhages appeared under the skin of the face and limbs, and haemostatic serum, calcium gluconate, vitamin C, and intramuscular injection of parental blood did not seem to benefit the condition. From April 1, however, no new haemorrhages developed, and the child improved steadily until April 6, when she developed a meningo-encephalitis. By the time she had recovered from this severe complication of measles, all that remained of the ecchymoses was two ulcers on the face and one superficial ulcer on each arm. By June 28, when the girl was discharged from hospital, the ulcers had healed, leaving scars on the cheeks that may later require treatment by plastic surgery.—I am, etc.,

Barnsley. I. A. G. MACQUEEN.

Pasteurization of Milk

SIR,—The publicity accorded to the views of Dr. A. H. Macdonald, late chief medical officer of Dr. Barnardo's Homes, in your leading article (Dec. 19, p. 727) makes it incumbent upon me to point out that the council of Dr. Barnardo's Homes did not share these views. At their meeting on Dec. 21, 1938, while Dr. Macdonald was still chief medical officer, the council ordered the general use of pasteurized milk throughout the Homes; any departure from this practice would be viewed with grave disquiet.—I am, etc.,

Dr. Barnardo's Homes, H. CARSON GILMORE,
London, E.1. Chief Medical Officer

Haemorrhagic Suprarenal Infarction

SIR,—I wonder if this syndrome ever results from disease of the suprarenal arteries? I have in mind the possibility of periarteritis nodosa presenting itself as an acute abdominal emergency demanding surgical measures. Under such conditions, if the vascular changes are not generalized and are obscured by a destructive haemorrhage, the true nature of the condition might conceivably escape recognition. But while the presence of an eosinophilia in any such case would be suggestive, only the verdict of histological examination could be accepted as final. It is nevertheless tempting to question whether the pulmonary, pancreatic, and renal symptoms which sometimes seem to occur in cases of suprarenal infarction may not ever be due to arterial disease of this kind.

I raise this possibility because I have knowledge of one case of periarteritis nodosa presenting itself in the guise of a mesenteric thrombosis (the presence of an eosinophilia in all such cases is therefore worth ascertaining). If, then, peri-

arteritis nodosa can give rise to a mesenteric infarction, may it not also occasionally result in a suprarenal infarction and so produce the syndrome to which Major K. D. Keele has drawn attention in the *Journal* of Dec. 12 (p. 687).—I am, etc.,

Birmingham. GILBERT S. HALL.

X-ray Department at Health Centre

SIR,—I am grateful to Dr. J. F. Brailsford for his letter (Nov. 28, p. 647) amplifying the limitations of the small-powered *x*-ray unit, but I would consider that the 30 mA unit, efficient though it may be for certain types of routine examination in the average size of patient, is less likely to permit accurate interpretation in patients of heavier build in certain types of examination which cannot be considered as other than routine. Furthermore, one must appreciate that the health centre may be the first contact between the patient and his doctor, and that the radiographic findings may have a far-reaching effect on the patient's subsequent treatment; also it is in the centre that one will hope to achieve that earlier diagnosis which may be of such importance.

While agreeing that the expert can decide whether the examination has been adequate, the fact that the patient would be referred to another centre for a routine examination would not instil an air of confidence in the patient or his doctor. The doctor who prefers to have his patient radiographed locally would want to know why his area had not been equipped with an apparatus of adequate power.

With regard to the apparent inconsistency of advocating miniature mass radiography, this method has now passed beyond the experimental stage and beyond the critical scrutiny of committees, and there is little doubt that it would have been adopted at an earlier date had it not been for the fact that suitable apparatus and organization could not be provided without impeding the war effort.

Many favourable comparisons have already been made between miniature and large films, and in a short time I shall hope to be studying a comparison of selected inconspicuous lesions found in the large film and recorded by the miniature method.

The care with which the suspect cases were clinically assessed formed a striking feature of the report recently made by Surg. Captain Brooks on the abnormalities found by the miniature method in 240,000 sailors, and if a similar method is adopted for the examination of the civilian population the success of miniature radiography will be assured.—I am, etc.,

London, S.W.3. J. V. SPARKS.

Rationed Distribution of Doctors?

SIR,—I have read with interest the letter from Dr. Duncan Leys (Dec. 12, p. 708) under the heading of "Rationed Distribution of Doctors?" There is so much controversial matter in this letter that it is perhaps permissible to refer to only a part of its contents. Rationalization is a difficult term to define, whether applied to industry or to medicine, but it should certainly include a due regard for the human element. No evidence that can be accepted has been advanced by Dr. Leys that the plan he proposes would effect a significant economy of medical personnel, and the regimentation of doctors and of the people, with the consequent denial of the freedom of choice which is implicit in the plan, would almost certainly arouse deep resentment. In short, with this plan we should embark on a social experiment of a very doubtful nature at a time when we can ill afford to do so.

Dr. Leys cites his own immediate area and gives, as an example of the effect of putting his plan into operation, an estimate, based on a population of 30,000, of the number of doctors who could be released for service with the Forces. This estimate will not do. The medical specialists centred in Inverness, or most of them, are concerned with a population, which varies with individual specialists, of from 90,000 to 200,000, and there are in some instances additional factors that further invalidate Dr. Leys's estimate. Of the doctors in general practice in this immediate area the majority (perhaps all) are, as part of a very useful form of rationalization, serving the State in different ways as well as attending to their own practices, and two of them are part-time anaesthetists.

There is, of course, a considerable amount of rationalization of the medical services to-day. We see it in the utilization by the State of the services of medical practitioners on recruitment boards, in the War Emergency Hospitals, and in the War Emergency Laboratory Organization. It seems to me that an extension of this rationalization is possible, which would result in closer co-ordination on a regional basis of existing medical facilities with the requirements of the Services, and by increasing the mobility of their medical personnel would go some way towards meeting the growing needs of the Forces.—I am, etc.,

Inverness. H. J. KIRKPATRICK.

Reporting of Deaths to Coroner

SIR,—I have read with interest Dr. W. B. Purchase's letter (Dec. 5, p. 677). It appears to me very retrogressive for any coroner to take steps for private reports to be made to him. Usually the coroner is a legal man (or the perhaps unfortunate combination of legal man with a long ante-dated medical qualification, out of touch with modern medicine and surgery) and in no manner capable of forming an opinion whether inquiry as to death is necessary like an actively practising doctor is (whether private or hospital). Judges frequently refer to communications sent to them or to information already known to a jury, and advise a jury to forget such, and I suggest this is a proper course for any coroner. Dependence on such overtly communicated information must undoubtedly induce a bias in favour of "official" reports, and hence the frequent clash between hospital and private practitioner evidence, which is well shown by Dr. Purchase's own statement: "It may well be that a patient should be sent in much earlier, or that the prior treatment has been inadequate." In a case reported some time ago the evidence of a doctor was rejected in favour of that of a "popular" medico-legal expert, and events showed the doctor to be correct. Equally one often sees protests of general practitioners that their evidence is ignored in favour of hospital evidence, given often by a newly qualified inexperienced doctor.

Particularly in accident deaths a coroner's verdict may deprive dependent relatives of any hope of proper compensation. If certain sections of the medical community are to be influenced to make secret reports, then I see no reason why medical men, employed by insurance companies responsible for compensation, should not be invited to make similar prior reports, a course to which no one would readily agree.—I am etc.,

London, E.7. BERNARD LEGGETT.

Medical Records in Wartime

SIR,—In your annotation (Dec. 12, p. 702) on "Faked Fits and Absent Records" you stress the importance of records from the patient's and the doctor's point of view. With this most practitioners would agree, but your further statement, "the excuses of a large and busy practice are of no avail," suggests that you are perhaps out of touch with the conditions of wartime general practice. The increase of work resulting from the obligation to attend absent practitioners' patients, the multiplication of certificates demanded, and the inadequate, and in my case non-existent, domestic staff make work on a pre-war standard quite impossible. The essential point is that patients should be thoroughly examined though possibly under-visited and unrecorded.—I am, etc.,

Cheadle Hulme, Cheshire. NICHOLAS CRAIG, M.D.

Electric Convulsion Therapy and Brain Damage

SIR,—In reply to Dr. Horace Hill (Dec. 5, p. 679), I suggest that the point at issue is whether the detrimental effects so far observed outweigh the proved beneficial results, for there is no doubt at all that convulsion therapy will considerably shorten the duration of a manic-depressive psychosis.

No clinical evidence of a permanent defect of brain function has been brought forward although hundreds of cases have been treated during the past two years. Some patients, however, show memory defects of a temporary nature. Prejudiced opinion emphasizes that the treatment is dangerous and empirical, that we are giving the patient epilepsy. It should be realized, however, that, whereas the spontaneous fit is a symptom of disease, in the electrically induced convulsion we are dealing with what Penfield and Erickson (*Epilepsy and Cerebral Localization*, 1941) term a "physiological fit," and

our concern is with the harm that can arise from the fit mechanism. Fever is similarly a symptom of disease, yet pyrexial therapy has a definite value. The reports of brain lesions observed in animals after subjection to induced convulsions are of great importance, although many of the acute changes found could be temporary and reversible. No comparable reports on the human subject are available. Punctate haemorrhages were described in a recent paper (*Arch. Neurol. Psychiat.*, Chicago, **47**, 385) on changes in the brain after electrically induced convulsions in cats, but it was admitted that whether similar changes are to be expected in human beings treated with electric shock cannot be determined from the material investigated.

In the organic and idiopathic epilepsies there is no convincing evidence that recurring seizures always produce intellectual deterioration. There is, in fact, no correlation between the severity and frequency of the seizures and the mental condition of the patient. This rather suggests that deterioration in epileptics is due to factors other than the seizures. It is well known that many epileptics have normal or high intelligence and are well able to maintain their positions in the community.

The introduction of E.C.T. by Cerletti was based on animal experiments, which convinced him that no permanent brain damage was likely to ensue in the clinical application of his method, and it appears that nothing has since been reported which would justify the abolition of such a valuable therapeutic procedure. It produces an immediate remission in uncomplicated cases of mania and melancholia, as instanced by two of our patients who are now at home and have been leading useful lives for the past six months after five and six years of melancholic misery in the back wards of the hospital. The treatment is admittedly of less value in schizophrenia.

Dr. Hill refers me to your annotation (May 30, p. 674), which begins with the statement that the convulsive treatment of mental disease constitutes one of the most striking recent advances in therapeutics. I assume he agrees with this, although, judging from his letter, he appears not to have taken advantage of it yet.—I am, etc.,

West Riding Mental Hospital, Wadsley. F. T. THORPE, Acting Medical Superintendent.

Obituary

L. R. BRAITHWAITE, F.R.C.S.

Consulting Surgeon, Leeds General Infirmary

The Leeds School of Medicine loses one of its most brilliant sons in the death of Mr. Leonard Ralph Braithwaite, which took place at his home at Headingley, after a short illness, on December 18. Braithwaite was the pupil, the assistant, and the colleague of the late Lord Moynihan, and on him the mantle of the Moynihan tradition may be said to have fallen. His entire career was spent in the West Riding, although his reputation extended far beyond its borders. He did much by his skill as a surgeon, his wisdom as a teacher, and his kindliness as a friend and counsellor to enhance the fame of the Leeds school.

Braithwaite was born in Halifax in 1878. Entering the Leeds School of Medicine, he became one of the most distinguished students in the anatomical department. He graduated M.B., Ch.B., with first-class honours, in 1903. After serving as house-surgeon at Leeds General Infirmary, he was appointed resident surgical officer, and the manner in which he acquitted himself in that position ensured him a place on the honorary staff when opportunity occurred. He was appointed assistant surgeon in 1909, became a member of the full staff in 1924, and retired on reaching the age of sixty in 1938, when he was made honorary consulting surgeon. Together with his hospital appointment he held the chair of clinical surgery at the University, and was made emeritus professor on his retirement.

In 1910, shortly after his appointment to the staff of the Infirmary, he became assistant to the distinguished surgeon who was then known as Mr. Berkeley Moynihan, and the close association continued for fifteen years. Like Moynihan, Braithwaite chose abdominal surgery as his special province. He assisted his chief both in private practice at Park Square and at the hospital, and Moynihan testified on several occasions to his own good fortune in having Braithwaite, thirteen years his junior, at his right hand. He once wrote of him as "unsurpassed by any surgeon in this country for his power of dealing safely and in the most consummately skilful manner with any problem that an operation might present." On the occasion of his own retirement in 1925, Moynihan wrote to his colleague: "Throughout all these years I have had the greatest happiness in my association with you. . . . And your loyalty and good faith have been without blemish. I have counted from the earliest days on your being the best man in our school in your day." Braithwaite acquiesced fully in what might be called the Moynihan discipline. He regarded surgery as demanding not only knowledge and a skilled hand but the dedication of the whole of a man's powers, and he denied himself every indulgence or luxury which might cause the slightest departure from the physical and mental alertness necessary for a crucial task. The partnership between the two men was not interrupted even by war service, for when Moynihan went out to France, in the early part of the last war, Braithwaite accompanied him and afterwards worked with him in, the hospitals of the Northern Command. He also served for a time with the Mediterranean Expeditionary Force in Salonika, and held the rank of major, R.A.M.C.

Much other work in Yorkshire included service on the honorary staffs of the Dewsbury and Pontefract Infirmaries and the Ilkley Coronation Hospital. He was an inspector of British Red Cross hospitals in the county. Like his old chief, he devoted much attention to the cancer problem. He was an active member of the British Empire Cancer Campaign, taking a great interest especially in the work done under the aegis of its Yorkshire Council in the department of pathology and cancer research of his own university. He was particularly skilful in the interpretation of scientific findings into language comprehended by the layman, and in the issue of propaganda containing the necessary warnings and instruction, but without emotional exaggeration. This faculty also accounted largely for his success as a teacher. He excelled alike in the formal lecture and in the practical demonstration. He wrote on surgical subjects, not extensively, but always with the same precision as characterized all his professional doings.

At the Royal College of Surgeons of England, of which he became a Fellow in 1907, he was elected a Member of Council in 1933 and held office as a Vice-President in the present year. He was Arris and Gale lecturer to the College in 1923, Moynihan lecturer in 1941, and Bradshaw lecturer a few weeks ago. He was a Fellow of the Association of Surgeons of Great Britain and Ireland, a prominent member of the Leeds and West Riding Medico-Chirurgical Society, and he had been for thirty years a member of the British Medical Association, and was vice-president of the Section of Surgery at the Annual Meeting at Belfast in 1937. Quite apart from his professional distinctions, he was greatly liked as a man, one who had hosts of friends among his colleagues, his students, and his patients, and with whom no time was grudged in the service of others and the solution of their difficulties. He was frequently an excellent host at the Leeds Conversation Club. He was also a "hospital man" in the true sense of the word, playing a large part in the shaping of hospital policy in the city. His name and personality never obtruded themselves, and yet his influence was felt in all aspects of hospital work. He also did much of the preparatory work at the outbreak of the present war in organizing the Leeds General Infirmary to deal with possible civilian casualties on a large scale.

Surgeon Rear-Admiral G. GORDON-TAYLOR writes:

Leonard Braithwaite was trained in a great school of surgery at a time when the latter was perhaps at the very pinnacle of its fame, and he worthily maintained the prestige of the Leeds Royal Infirmary with all its wealth of tradition. In matters of surgical technique he was perhaps fortunate in his association with Moynihan, and in the flawless artistry of his own work and his gentleness of touch he even rivalled his master. Perhaps the most exquisite operation that I have ever witnessed by

any surgeon in any country was a gastrojejunostomy performed by him at the Royal Infirmary a few years ago on the occasion of a visit of the surgical section of the Royal Society of Medicine to Leeds. As in the fingers of his master, the 5/8-circle intestinal needle was a beautiful tool in his skilful hands. Though possessed of sublime surgical courage, he was essentially a sure and safe surgeon; the desperate adventure and forlorn hope made less appeal to his artistic temperament than to those who are more frequently confronted with the cancer problem.

The memory remains of a charming English gentleman, proud of his Yorkshire county, devoted to the Leeds Royal Infirmary, a man of charm and blessed with a genius for friendship. In his cult of punctuality he was almost an ascetic, but the meticulous ordering of his days and his evenings was dictated by a supreme desire to give of his very best to those who entrusted their lives to his hands. His manner of speech with its attractive drawl did not betray his origin from a great Northern county; his personality radiated comfort and confidence and must have given courage to thousands of patients as surely as it enslaved his many friends and admirers. Best of all he loved his own hearth and home, his devoted wife, and the three daughters of an adored and adoring father.

Dr. GLADYS JULIA CUTHBERTSON RUSSELL, assistant M.O.H. for maternity and child welfare in Leeds, has died at the age of 46. She graduated M.B., Ch.B. of St. Andrews in 1919 and took the D.P.H. of Manchester in 1924. She joined the public health service after house appointments at the Dundee Royal Infirmary and the North Lonsdale Hospital, Barrow, working first under the Cheshire County Council and later in Monmouthshire. She moved to Leeds in 1928, and was soon promoted to take charge of the maternity and child welfare work of the city, and was personally responsible for the growth of the infant welfare clinics and ante-natal clinics, as well as for the development of the midwifery service and the introduction of the "home helps" system. The hospital accommodation for mothers and children was enlarged and reorganized, and Dr. Gladys Russell laid the foundation of the day nursery system. A public tribute to her admirable work and character has been paid by Dr. J. Johnstone Jervis, M.O.H. for Leeds, in the *Yorkshire Post*. She joined the B.M.A. in 1919, was an active member of the Medical Women's Federation, and the first medical woman to hold office as president of the Yorkshire Branch of the Society of Medical Officers of Health.

Dr. EDMUND HENRY COLBECK, who died suddenly at Farnborough, Hants, on Dec. 16, had practised for many years in Upper Berkeley Street, W., and on his retirement from the visiting staff of the City of London Hospital for Diseases of the Chest was elected emeritus physician. He was born at Batley in Yorkshire in 1865, and was educated at Tonbridge School, and at Nelson and Wellington Colleges, New Zealand; he entered Caius College, Cambridge, with a science exhibition, graduating B.A. with first-class honours in the Natural Sciences Tripos of 1887. He then went on to St. Mary's Hospital with a university scholarship, took his medical degrees at Cambridge in 1889, and proceeded M.D. in 1892. After serving as house-physician at St. Mary's and clinical assistant at the Vienna General Hospital, Dr. Colbeck took the M.R.C.P. in 1890 and was elected F.R.C.P. in 1904. During the last war he was consulting physician to the New Zealand Military Hospital at Walton-on-Thames and the South African Military Hospital at Richmond, holding the temporary rank of major N.Z.M.C. He was for a time additional examiner in medicine for the Cambridge Final M.B., and had been an active member of the British Medical Association, serving for two periods on the Council and holding office as vice-president of the Section of Pharmacology and Therapeutics in 1910. Two of his books—*Diseases of the Heart* and *The Science and Art of Prescribing*—passed into a second edition, and he contributed a number of papers to the medical journals on diseases of the heart and lungs. In 1937 a portrait of himself painted by Sir William Rothenstein was presented to Dr. Colbeck at the City of London Hospital for Diseases of the Chest to mark his retirement as senior physician after 45 years' service on the staff.

Correction

We regret that the date of the death of Mr. Russell Howard was wrongly given in the *Journal* of Dec. 19 (p. 740), as Dec. 4 instead of Dec. 2.

Medical Notes in Parliament

Venereal Disease: Regulation 33B

In the House of Commons on Dec. 15 Dr. EDITH SUMMERSKILL moved that an address should be presented to the King praying for the annulment of Regulation 33B. She said the regulation would be quite ineffective and would simply delay real action. During the last year the number of new cases of venereal disease coming to civilian clinics for treatment was 70,000. If they added those that had not been traced, the number of new cases might be 150,000. The numbers in the Forces must also be added, and we had, in fact, gone back in our figures to 1932. In a year or two we might go back to 1928 unless 16,000 expectant mothers who had been infected were traced. This regulation would not protect the men and the country from venereal disease. It provided for the treatment of individuals who had infected two others—nothing more. No two men would inform on a respectable woman who had been infected innocently. The regulation would get only a few people, probably only prostitutes and a few other unfortunate women, but the vast number of infected victims would be ignored. The problem called for a bold and courageous lead from the Minister. The time and money spent on propaganda could be more usefully directed if notification and treatment of these diseases were made compulsory.

Example of Sweden

It would be suggested that many members of the medical profession were not in favour of compulsion. Lord Horder, the president of the Society for the Prevention of Venereal Diseases, was 100% in favour, but she believed he had never been consulted. She drew attention to the speech of Dr. Laird at a meeting of the Medical Society for the Study of Venereal Diseases this year. He said that as a result of compulsory notification in Sweden the defaulter rate in 1935 was only 2.5%, but in this country, where we had not compulsion, it was 82.5%. Replying to Miss Rathbone, who asked if those figures had been checked, Dr. Summerskill said she could only quote figures given by responsible persons. Those figures were in the editorial in the *British Medical Journal* for Nov. 21 (p. 611), and the case was put for compulsory notification. Those who said that the results of compulsory treatment and voluntary treatment were the same had really no case if the figures were carefully examined.

There should, Dr. Summerskill continued, be clinics which were accessible and a social service which would follow up the contacts. There should also be a 100% grant from the Government. The clinics should not be labelled, but should be places where all women's complaints were treated. It was essential, as a wartime provision only, to have a blood test for all expectant mothers. We could profit by the experience of Sweden, where every person with venereal disease must submit to treatment. Immediately a patient reported to the doctor and his disease was diagnosed, the doctor reported to the medical officer of health. A person who exposed another to risk of infection was liable to imprisonment or a fine. If infection occurred there were even more severe penalties. Each party to a marriage must present a written declaration that he or she was free from venereal disease. If a patient ceased attending at a clinic an order would be served on him. If the order was ignored, he must undergo compulsory examination and treatment at the hospital. That would be a comprehensive scheme, and would bring home to every patient suffering from the disease that treatment was essential.

A Useful First Step

During the debate which followed Sir FRANCIS FREMANTLE expressed the opinion that the medical profession would be divided on this subect because they did not all approach it from the same point of view. The whole question to-day must be, What was going to be effective at present? The disease accounted for 15% of the admissions to mental hospitals in London and 16% of the stillbirths. Gonorrhoea, which was crippling rather than killing, accounted for half the sterility in women and 70% of the ophthalmia cases in newly born children. This was an international problem. Regulation 33B was a useful first step, and was all that could be done at present. What was the good of pretending to set up clinics when they had not the doctors to man them, and they could not get them while the war was on? The same thing applied to nurses, almoners, and health visitors. Notification without treatment was a waste of time and labour and brought the whole scheme into ridicule.

Dr. HADEN GUEST, supporting the regulation, said that in the Services, where there were both compulsory notification

and compulsory treatment, there was a tremendous rise in venereal infection. Men and women in the Forces were suffering under tremendous strain—moral, spiritual, and physical. If, as he believed, Regulation 33B would help to protect them against the dangers of infection, it was the duty of Parliament to put it into operation. Compulsory general notification of tuberculosis had not been successful, and compulsory notification of venereal disease would not deal with the larger number of cases. They must get at the centres of infection, and the regulation was a way of doing that.

Widespread Ignorance

Sir E. GRAHAM-LITTLE supported the regulation as a first step. He urged that the way in which science should regard the curve of incidence of venereal diseases should be as an epidemic. It was useless to pretend that they could stop an epidemic by dilatory methods such as were proposed from time to time in the way of safeguards. It must be something that could be done here and now. The epidemicity of this trouble was one of its main features. There was widespread ignorance on the part of the general public as to the origin and the methods of the spread of venereal diseases. The compulsory treatment of infected people was a cardinal point of the value of the regulation, because, while a person was not cured of syphilis by one or two injections of the arsenical preparation now used so extensively, he or she was rendered very rapidly non-infective. He was not very fond of notification, which destroyed to a large extent the privacy which ought to attend medical treatment and might possibly defeat the end in view. He was not sure, however, that it might not become necessary for the Minister of Health to extend his powers to include notification—as he hoped he could—under the Defence of the Realm regulations.

Dr. H. B. MORGAN opposed compulsion in any form, whether it was notification or treatment. The idea of compulsion, he contended, was rampant in medical bureaucracy. A great danger was that some doctors were banding together in order to get people to do things which were really unnecessary and unjustifiable from the medical treatment point of view. There was a delusion among medical men that venereal disease was always curable. It was not. It could be cured in some cases. Sometimes patients resisted the most intense form of treatment. The Minister of Health should withdraw the regulation, provide adequate facilities for treatment, and do all he could voluntarily.

Minister's Reply

Mr. ERNEST BROWN, having emphasized that self-control was the proper course both medically and morally and that a higher ethical standard and a fuller appreciation of spiritual values were the only complete and final solution of the problem, said that unless something more was done in this country this might become a tragic issue. Most, though not all, of them agreed that they ought if possible to keep the voluntary system and make it effective. During the last six months they had taken steps to co-ordinate education on this matter with all other health subjects in the hands of the Central Council for Health Education. The Press had dealt with the subject most helpfully, and through arrangements with the B.B.C. information for the public was presented in a way it had never been presented before. A bold, constructive, and sane discussion of this matter on a healthy plane should help the religious forces of the country to make their own case clear. No Minister would raise this issue unless there were grave reasons for doing so, because it involved personal questions of the most intimate kind. As always in wartime there was a rise in venereal disease. The clock had been put back 10 years. The latest information was that the rise was still going on, and the clock was being put back still further. No one could be deaf to the fact that some regulation was needed. Regulation 33B was only a part of the answer to the question.

There were, Mr. Brown continued, three main essentials in the attack on these diseases—public education, adequate free treatment, and indirect action to discourage promiscuity. He put education first. The Ministry were arranging for a complete new series of posters for free issue to local authorities. In the Services educational work was very fully organized, and he had recently been in consultation with various civil Departments, especially on the production side, on the possibility of extending educational work in their activities, and here also expansion could be looked for.

Extent of Free Treatment

Free treatment under conditions of complete secrecy had been available for the last 25 years. There were now 249 treatment centres in Great Britain, three-quarters of which were at hospitals. Eighteen new centres had been provided since the war began, and five more were on the point of opening. The Service demands for specialists and other medical staff made it progressively less easy to start new centres, and to meet the need, especially in the rural areas, a new wartime arrangement had been initiated under which general practitioners with special experience provided free treatment at their own surgeries. The latest returns showed that 109 practitioners were taking part, and they served 74 areas in 11 different counties.

Indirect help by the provision of more and more healthy facilities for recreation was needed. The regulation was not an ill-judged attempt to solve the problem of venereal disease by a single measure but a carefully planned item in a planned programme. The Government claimed that it would stop a gap in the voluntary system which had existed for a long time, and which assumed a new seriousness in wartime. It represented a new approach to the problem—namely, a public health approach. It did not attempt to control solicitation, as did Regulation 40D of the last war, or to discriminate between the sexes. It provided the power to deal with a health problem in a manner which provided safeguards against blackmail.

Safeguards

Mr. Brown said he was proposing to issue a direction by which a patient would know of the penalties for deliberately making false statements before giving detailed information of any kind. A second safeguard was that the practitioner must be satisfied that the information given was *prima facie* reliable in the light of the medical evidence he had. The next stage was that the medical officer of health must receive two separate notices. That was put in the regulation as a safeguard. This was not the case in Sweden, where action could be taken on information received from one person, but here more than a double safeguard was given for persons concerned against any reasonable risk regarding false statements by asking for information to the medical officer of health from two different sources. He made it clear that the whole of the proceedings were private. There was no publicity unless the person concerned made the publicity. Moreover, every attempt would be made to get the person to come voluntarily.

Swedish Figures "Fallacious"

In conclusion, Mr. Brown said that the comparison between Sweden and this country in regard to persons defaulting before completion of treatment was completely fallacious. The Swedish figure of 2% was arrived at by comparing the number of persons who in 1935 ceased treatment early and could not be found again with the total number of cases notified. The English figure of 82% was obtained by subtracting from 100 the percentage of cases stated to have completed their tests of cure in 1935. It was clear that the figures were not comparable, and that the picture given by the English figure was quite misleading. The important percentage was the proportion of new infections with early syphilis which did not complete one course of treatment, since completion of one course even without any further treatment rendered the great majority of cases non-infectious.

Already the appearance of the regulation had caused some persons who had not volunteered for treatment before to come forward. He did not believe that the regulation would be ineffective, but if any new powers were needed he would not be slow to ask the House for them.

On a division, the motion to annul the regulation was negatived by 245 votes to 31.

Medical Attention of Home Guard

Answering Viscount Elibank in the House of Lords on Dec. 15, Lord CROFT said that if members of the Home Guard entered a civil hospital for treatment they would be treated as other civilian patients. If they entered a military hospital or convalescent home, it was desirable that they should be treated in wards or rooms specially reserved for them. The Government would give instructions for this procedure wherever possible in military hospitals. Members of the Home Guard were treated alike in sickness, and under conditions of battle or serious air raid it would often be impossible to segregate men according to rank except to the detriment of the medical attention they should receive. Provision was made that every Home Guard who was injured got medical attention.

Miniature X-ray Equipment

Miss HORSBRUGH stated on Dec. 15 that deliveries of miniature *x*-ray equipment had not begun. Progress had been made with the detailed arrangements for its use as soon as it came to hand. Mr. Brown hoped to issue in the next few days a circular to local authorities regarding the development of the tuberculosis service in all its aspects, including particulars of the allocation of the miniature *x*-ray sets. Arrangements had

been made for additional beds to be available for tuberculosis. On the supply of nurses for this and other forms of work Mr. Bevin and Mr. Brown were discussing detailed plans with the organizations concerned.

Workmen's Compensation Bill

During the committee stage of the Workmen's Compensation Bill Dr. RUSSELL THOMAS said he understood that "pneumoconiosis" applied to the inhalation of any kind of harmful dust. "Silicosis" and "anthracosis" merely particularized the effect of the special dust inhaled. Anthracite workers quickly developed a cold, but did not get pneumoconiosis at once. The cough was caused by particles of coal irritating the bronchial tubes. The cough made the miner take deep breaths, whereby he inhaled spear-like particles of anthracite which pierced the lungs and set up fibrosis. Mr. PEAKE said the evidence was that this new form of pneumoconiosis existed among coal workers and coal trimmers in South Wales. It was therefore proposed to make a scheme which would cover these cases. There were now 43 diseases scheduled under the Act, and the Home Office would not proceed to make general schemes for pneumoconiosis affecting industry until there was evidence that the disease existed and that it was due to the employment. The Home Office had taken power to go ahead with further schemes without having again to come to Parliament for authority.

Mr. MARSHALL said he hoped that the scheme would be expanded to include pulmonary diseases which affected grinders. Mr. PEAKE stated that the Home Office would require specific evidence before schemes were made under the Bill. The word "pneumoconiosis" was widely defined to include silicosis, asbestosis, and any affection due to the inhalation of dust. Not in every industry where dust was inhaled could it be proved that inhalation caused a disease connected with the employment.

The Services

The King has approved that the following be mentioned in recognition of gallant and distinguished services in the Middle East during the period Nov., 1941, to April, 1942:

Major-Gen. D. C. Monro, late R.A.M.C., and Brig. (local) S. Smith, late R.A.M.C.; Brig. (temp.) F. G. A. Smyth, C.B.E. (since died), Brig. (local) N. St. J. G. D. Buxton, Col. (temp.) D. C. Scott, O.B.E., Lieut.-Col. F. R. H. Mollan, M.C., Major (temp. Lieut.-Cols.) D. Bluett, G. M. Heiron, A. G. Henderson, J. W. Hirst, T.D., R. Lees, R. Marnham, Major L. F. Richmond, Capts. (temp. Majors) I. Aird, J. B. Bunting, J. M. Corall, J. G. Elmslie, R. S. Hooper, C. McT. Hopkins, R. J. Kellar, H. M. R. Knight, J. B. M. Milne, M.B.E., W. H. Purves, J. C. Reed, and Capts. R. D. I. Beggs, M.C., B. A. McL. Brown, J. W. A. Dennis, J. H. Gibson, J. D. P. Graham, D. R. Hood, C. R. Houghton, M.B.E., H. M. Kelsey, G. T. L. F. Morris, C. G. Pantin, W. J. Shannon, R.A.M.C.; Major (temp. Lieut.-Col.) B. D. Khurana, Major F. W. Whiteman, and Capt. I. B. Mallik, I.M.S.; Subadar-Major T. K. Afrida and Assistant Surgeon J. F. T. O. Nazareth, I.M.D.

The King has appointed Capt. S. A. Mian, I.M.S., an M.B.E. (Military Division), and has approved the mention of Col. A. C. L. O'S. Bilderbeck, Lieut.Col. G. B. Hanna, O.B.E., Capt. (temp. Major) K. L. Jetley, and Capt. P. J. Wormald, I.M.S., and Jemadars F. Singh and J. S. Dugal, I.M.D., in recognition of gallant and distinguished services in Waziristan.

Surg. Lieut.-Cmdr. (Acting Surg. Cmdr.) T. C. Stevenson, R.N.V.R., has been appointed O.B.E. (Military Division) for outstanding devotion to duty in tending sick and wounded during and after the fall of Singapore.

CASUALTIES IN THE MEDICAL SERVICES

Lieut.-Col. TREVOR AVELING BUTCHER, O.B.E., R.A.M.C., who was killed in action in North Africa in December, was born on Aug. 12, 1893, and was educated at the University of Cambridge and at University College Hospital, qualifying M.R.C.S., L.R.C.P. in 1918. He graduated M.B., B.Chir. in 1924, and proceeded M.D. in 1929. He served in the war of 1914-18, and in 1920 was appointed O.B.E. in recognition of distinguished and valuable services during the campaign in South Russia. After the war he was employed for a time at Ministry of Pensions hospitals at Grantham and Leicester, and then settled in practice in London. On the outbreak of the present war he re-entered the R.A.M.C. as lieut., was immediately promoted capt., became major in 1941, and lieut.-col. in 1942. He had been a member of the B.M.A. since 1927. H. R. writes: T. A. Butcher was a keen temporary R.A.M.C. officer with an excellent record in the last war. Not very long after demobilization he started practice in South Kensington, where his unassuming friendly personality soon made him popular with his colleagues, as well as bringing him a steady stream of patients. His quiet easy manner did not prevent recognition of the fact that he knew his medicine and surgery pretty thoroughly; and his capacity for steady reliable work and plenty of it naturally resulted in the reward of a growing practice. He was president of the Chelsea Clinical Society in 1937-8. He was also honorary local secretary for the Royal Medical Foundation of Epsom College. The sympathy of Butcher's many friends in Kensington will be universally extended to his widow and daughter.

Wounded.—Lieut. J. F. A. Wood, R.A.M.C.

Previously Reported Prisoner of War, now Reported Wounded and Prisoner of War.—War Subs. Capt. A. Macfarlane.

It is regretted that by a clerical oversight Major-General Harvey's surname was omitted from the obituary notice which appeared in this column on Dec. 26 (p. 770). The name should have read Major-General Alexander William Montgomery Harvey.

Two slips crept into the obituary notice of Capt. P. C. Banerjee in the *Journal* of July 11, 1942 (p. 56). He graduated M.B. of the University of Calcutta in 1918 (not 1932) and joined the B.M.A. in 1925 (not 1932).

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The following candidates have been approved at the examination indicated:

FINAL M.B.—*Part I (Surgery, Midwifery, and Gynaecology)*: F. Ashton, E. H. Back, R. A. J. Baily, H. W. Balme, R. F. Barlow, D. R. Barnes, C. H. Barnett, G. M. Barrett, W. M. Bennett, G. G. B. Blackman, R. H. Boardman, J. F. Bolton Carter, D. L. Bridgewater, A. J. Briggs, W. L. Calnan, A. Carpenter, M. C. Connell, J. Davenport, E. W. Deane, M. B. Devas, R. J. Dickson, W. A. dos Santos, D. H. Drennan, C. O. Edwards, J. W. Evans, J. W. Fawcett, W. M. Foreman, R. M. Forrester, H. A. Fraser, A. G. Freeman, D. S. G. Genge, R. N. R. Grant, H. C. Gupta, B. Haigh, J. R. Handforth, E. H. Hare, H. Harris, M. Hemming, J. K. Hinds, P. Holliday, A. E. Howarth, P. H. Huggill, D. M. Jeffreys, P. F. Jones, R. N. Jones, D. A. G. Kaye, H. W. H. Kennard, A. Lask, J. O. Laws, J. Lister, J. C. Lloyd, R. E. Loder, C. S. McKendrick, A. I. MacLeod, D. H. Makinson, P. G. Mann, A. S. Mason, J. K. F. Mason, R. G. May, F. S. Mellows, R. B. Meyer, P. H. Mitchell, D. A. Mitchison, J. R. Moffat, G. M. J. Nicholl, J. E. Oliver, J. H. C. Phillips, J. M. Potter, E. J. T. Prettejohn, A. P. H. Randle, J. R. Robinson, K. C. Robinson, P. H. Rogers, P. H. Schurr, E. L. Simons, A. N. Smith, T. R. Steen, R. V. Stone, R. G. Tasker, S. Tischler, W. H. Townsend, J. D. Trethowan, L. R. Twentyman, B. P. Webster, D. Whitfield, E. H. Williams, P. A. O. Wilson, O. H. Wolff, R. G. Woodsend, W. D. Wylie, S. Young. *Women:* J. Hardy, V. U. Lutwyche, H. C. Mason, M. E. Wehner.

Part II (Principles and Practice of Physic, Pathology, and Pharmacology): J. N. Agate, O. B. Appleyard, D. J. ap Simon, H. W. A. Baron, D. J. Bauer, F. W. Blacklay, P. L. Blaxter, J. F. Bolton Carter, N. A. Campbell, A. W. Capon, E. F. Carr, R. J. D. Carrick, J. A. H. Collyns, M. C. Connell, W. N. Coombes, P. N. Cunliffe, W. A. dos Santos, W. K. Douglas, P. F. Early, F. M. P. Eckstein, P. D. Eeman, J. V. T. Gostling, A. J. Gray, D. W. H. Griffiths, A. G. Harrold, B. M. Heap, T. S. Hindle, S. C. H. Hood, P. H. S. Hooper, P. E. Hughesdon, H. R. Jolly, R. N. Jones, M. C. S. Kennedy, L. G. Kingdom, F. K. Lau, D. I. Lishman, G. C. Lloyd Roberts, T. G. E. Loosemore, J. K. F. Mason, P. H. N. Matthews, S. R. Mawson, H. R. A. Michelmore, N. L. Mills, M. C. Mundle, J. F. Neil, Y. H. Ng, R. V. Peters, H. L. Pierce, B. Pownall, A. P. H. Randle, R. K. Reid, A. G. Richards, W. Rogers, P. H. Sanderson, J. H. Simpson, R. D. Slack, I. M. Smith, H. C. Still, M. G. P. Stoker, R. N. Ticehurst, W. H. Trethowan, B. P. Webber, B. C. Welshman, L. A. S. White, D. E. C. Whittome. *Women:* H. M. Comely, P. B. Shaw, E. Tylden.

UNIVERSITY OF LEEDS

The following candidates have been approved at the examinations indicated:

M.D.—A. L. Taylor.

FINAL M.B., CH.B.—*Part I:* Jean Bateman, Isabel H. M. Blyth, I. Bruce, P. S. R. Burrell, *H. N. Burwell, H. S. Capoore, H. H. Collins, W. D. Fletcher, D. Fox, R. H. Foxton, R. Goldberg, Winifred M. Haigh, J. F. Hanratty, *Cecilia Henry, M. Hutchinson, A. R. Hyslop, *R. B. Jones, Ursula M. Kirk, A. C. Knight, E. R. Lecutier, A. L. McKnight, O. Magidson, Barbara J. Maxwell, M. M. Nagley, S. N. Nathan, Dorothy C. Newell, A. P. Percival, H. Shaw, Victoria M. D. N. Shaw, M. Stanton, D. R. K. Street, P. A. Thorpe, Gwenith Turnbull, W. N. Wild, J. R. Wilson.

* Distinction in public health.

UNIVERSITY OF DUBLIN

The following candidates have been approved at the examinations indicated:

M.D.—J. C. Gaffney, C. B. Robinson.

M.B., B.CH., B.A.O.—K. H. Anderson, Ivy K. Bayne, Rena Becker, Brenda R. Boydell, G. R. Connolly, J. W. Dignan, C. K. Elliott, J. M. Hanrahan, Hannah E. Hinchcliff, G. A. McL. Lee, B. Marcus, L. T. H. Mills, Lavinia F. Nightingale, F. M. Lanigan-O'Keeffe, A. V. Poots, R. O. D. Reid, N. L. Smith, M. G. Jackson-Smyth, R. T. Towson.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

At a meeting of the Royal College of Surgeons of Edinburgh, held on Dec. 18, with Mr. J. W. Struthers, President, in the chair, the following, who had passed the requisite examinations, were admitted Fellows:

J. C. Brass, I. MacK. Davidson, A. T. George, A. M. Glen, J. R. E. James, G. B. Jones, H. Karn, E. W. Knowles, Jean Mason, J. Potter, T. C. Skinner, K. Watson, H. G. E. Williams.

No. 49

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended Dec. 12.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1942 (a)	(b)	(c)	(d)	(e)	1941 (Corresponding Week) (a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	75	6	16	2	5	132	7	30	4	2
Deaths		1	1				—	3		
Diphtheria	1,079	41	265	86	25	1,103	54	313	30	37
Deaths	21	3	1	2	—	27	1	9	2	—
Dysentery	133	19	53	—	—	165	3	73	—	—
Deaths		1	—	—	—			—	2	—
Encephalitis lethargica, acute	3	—	1	—	—	3	—	1	—	—
Deaths		1	—				—	—		
Erysipelas		—	71	6	2		—	52	8	6
Deaths		—					1			
Infective enteritis or diarrhoea under 2 years				66						
Deaths	51	5	9	10	2	28	1	15	2	3
Measles	13,287	459	563	36	28	667	55	27	75	4
Deaths	14	1	5	—	—	1	—	1	—	—
Ophthalmia neonatorum	69	5	12		—	83	2	14		2
Deaths										
Paratyphoid fever	7	1	—	—		8	—	3	—	
Deaths	1	—	—	—	—	—	—		—	
Pneumonia, influenzal*	989	61	11	5	1	979	52	13	3	13
Deaths (from influenza)	42	2	7	1	—	29	1	1	—	1
Pneumonia, primary			236	39				208	18	
Deaths		—		23	13		83		11	5
Polio-encephalitis, acute	—	—				—	—			
Deaths		—					—			
Poliomyelitis, acute	7	—	2	12	4	14	—	1	2	—
Deaths		—	—				—	—		
Puerperal fever		2	13	—	—		—	10	2	—
Deaths		—					—			
Puerperal pyrexia	174	15	22		—	178	5	9		5
Deaths										
Relapsing fever	—	—			—	—	—			
Deaths										
Scarlet fever	2,769	148	453	95	39	1,324	35	238	59	35
Deaths	—	—	—	—	—	—	—	—	—	—
Small-pox	1	—	6		—	—	—	—		—
Deaths		—	—	—	—		—	—	—	—
Typhoid fever†	10	1	—	7	—	17	4	—	9	5
Deaths	1	1	—	—	—	1	—			
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths			—	—	—			—	—	—
Whooping-cough	1,326	72	46	29	7	1,725	209	52	48	19
Deaths	5	—	1	2	1	6	1	—	—	—
Deaths (0–1 year)	388	44	75	42	18	322	33	75	24	18
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	4,896	711	619	243	141	4,271	552	592	184	114
Annual death rate (per 1,000 persons living)			13·9	16·2	‡			12·9	12·2	‡
Live births	5,744	666	839	290	233	4,674	413	710	337	198
Annual rate per 1,000 persons living			17·3	19·4	‡			14·4	22·4	‡
Stillbirths	230	25	29			177	14	24		
Rate per 1,000 total births (including stillborn)			33					33		

* Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

† Includes paratyphoid A and B for Northern Ireland.

‡ Owing to evacuation schemes and other movements of population, birth and death rates for Northern Ireland are no longer available.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* 2,082 more cases of measles were reported than in the preceding week. Substantial rises were also recorded for whooping-cough 131, acute pneumonia 99, and diphtheria 68. There was a further fall in the incidence of scarlet fever 131, and of dysentery 58. One case of small-pox was notified in Yorks West Riding, Swinton U.D.

The only large variations in the incidence of scarlet fever within the counties were those of Staffordshire with 43 fewer cases, and Yorks West Riding with 41. Lancashire, with a rise of 51, was the only area with a notably higher incidence of acute pneumonia. The mounting notifications of whooping-cough were due mainly to the experience of Lancashire with 57 more, and Middlesex with 34 more cases.

A violent outbreak of diphtheria involving 111 persons in Edmonton M.B. brought the Middlesex notifications up from 19 to 126. In Yorks West Riding the previous total went up by 33 and in Staffordshire by 26; in Lancashire there were 41 and in Wales 36 fewer cases.

The largest increases in the notifications of measles were those of Lancashire 507; Yorks West Riding 420; Nottinghamshire 198; Leicestershire 183; Staffordshire 147. Lancashire and Yorks West Riding contributed 44% of the total cases of measles during the week. There were severe epidemics in some of the county boroughs, the biggest totals this week being reached by Manchester C.B. 449, Bradford C.B. 495, and Leeds C.B. 487.

Although the figure for dysentery has fallen by 58, the disease is still prevalent: 14 cases, an increase of 11, were recorded in Hampshire (Petersfield U.D. 2, Petersfield R.D. 12); in London 18 cases were recorded in twelve boroughs; in Lancashire notifications went up from 32 to 34 (Liverpool C.B. 14, Manchester C.B. 8, Blackburn R.D. 5, Whiston R.D. 6); and in Yorks North Riding from 10 to 17 (Middlesbrough C.B. 12, Redcar M.B. 5).

In *Scotland* there were 75 more cases of scarlet fever, 51 more of acute primary pneumonia, 40 more of measles, and 31 more of diphtheria. The higher incidence of diphtheria and pneumonia was fairly general. Dundee with 104 notifications had the largest number of cases of measles; in Glasgow the figure had risen from 46 to 82, and in Aberdeen from 35 to 63. Of the total cases of scarlet fever 40% were reported from the two cities of Glasgow 99, and Edinburgh 87.

Up to Dec. 22 there were 35 cases of small-pox, with 8 deaths, in Edinburgh. No further cases have been reported from Lochaber, Inverness-shire, where the only case proved fatal.

In *Eire* an increase of scarlet fever, due to an outbreak in Waterford C.B. 33 cases, was the chief feature of the returns. The notifications of poliomyelitis fell from 18 to 12.

TUBERCULOSIS IN WARTIME

Speaking on the subject of tuberculosis in peace and war in his Malcolm Morris Memorial Lecture recently, Sir Arthur MacNalty said that in 1938 all forms of tuberculosis were declining in Great Britain. The decline in mortality rates had been greater since 1931 than at any time during the present century. It was, therefore, bitter to record that progress had for the second time this century been retarded by war. In 1939 deaths from tuberculosis in England and Wales numbered 26,250, in 1940 28,144, and in 1941 they had risen to 28,669. The figures for the two complete war years did not include non-civilians, but there was some increase in the disease among members of the Services. The incidence of pulmonary tuberculosis in the Army had shown, so far as men were concerned, no upward trend. At the outbreak of war there was a temporary dislocation of the tuberculosis services in some areas, but excellent work was now being done in spite of many difficulties. The present scale of rationed food was adequate for the tuberculous if the diet was carefully planned, as in sanatoria and hospitals. Since the war there had been an increase in mortality from this disease in mental hospitals and mental deficiency institutions. Miniature or indirect radiography, the speaker continued, was an important aid to early diagnosis, but it reinforced and did not supplant clinical examination. Recent work in chemotherapy encouraged the hope that a drug might be found which would destroy the tubercle bacillus in man. After the war more institutional provision and beds would be needed. The Medical Research Council favoured the setting-up of a national board to co-ordinate the planning of a national rehabilitation scheme. This was first advocated by Sir Pendrill Varrier-Jones in 1936. Such a board was called for, especially at the present time.

Medical News

A conference for workers in the medical sciences will be held on Saturday, Jan. 9, at 2.15 p.m. at the London School of Hygiene, Keppel Street, W.C.1. The conference will consider problems connected with the organization, application, and personnel of the medical sciences. It is hoped that any persons interested will attend, and will bring forward their own experience and suggestions for problems to be undertaken. Programme: (1) Address by the Chairman (Dr. D. McClean); (2) address by the industrial organizer of the Association of Scientific Workers on the part which the association can play in improving the status of medical scientists and in bringing the results of their work before the public; (3) accounts by members of the Medical Sciences Committee of the work of the subcommittees: Medicine in industry—Dr. D'Arcy Hart, Nutritional research and the need for a Nutrition Council—Dr. Yudkin, Co-ordination of medical research—Dr. Oakley, Training of medical technicians—Mr. Griffin, The need for a national supply of experimental animals—Mr. Bacharach. Further information may be obtained from the A. Sc. W., 73, High Holborn, W.C.1, or from Dr. J. H. Humphrey, 81, Highgate West Hill, N.6.

The London and Home Counties Branch of the Medical Superintendents' Society will hold a meeting on Saturday, Jan. 16, at 2.30 p.m., at B.M.A. House, Tavistock Square, for a discussion on the relative merits of medical and lay administration of hospitals. Any medical man who is interested will be welcome at the meeting.

It is stated in the Press that Dr. John Ryle is to vacate the regius professorship of physic at Cambridge during the present academic year.

Dr. John Crosthwaite Bridge has just retired from the post of Senior Medical Inspector of Factories, to which he was appointed in 1927; he will be succeeded by Dr. E. R. A. Merewether, who is now in the United States lecturing at the invitation of the American Public Health Association.

Dr. R. E. Smith, medical adviser to Rugby School, has been appointed health adviser to the National Association of Boys' Clubs. Dr. Smith's appointment is a direct outcome of a memorandum submitted to the Council of the National Association by Sir Hubert Llewellyn Smith, and it is hoped that, as well as advising on health problems, Dr. Smith will undertake research work concerning the general health of the working boy.

The Registrar of the University of Glasgow and the Secretary of the University of Edinburgh have jointly published an announcement that under recently revised regulations of the Ministry of Labour and National Service it will be necessary for all young men who wish to enter upon the study of medicine at either university in Oct., 1943, and who were born on or before July 31, 1925, to make immediate application on a form to be obtained from the Registrar of the University, Glasgow, W.2, or the Dean of the Faculty of Medicine, the University, Edinburgh, respectively. Women applicants and men born after July 31, 1925, should not apply until May 15 next.

Plans for building hospitals, clinics, maternity and child welfare centres, where needed, from factory-produced units have been developed by the British Concrete Federation in collaboration with the Ministry of Works and Buildings. These units can be expanded or adapted to suit requirements, and a unit building is proof against fire and the one-kilo incendiary bomb, has a high resistance to blast, and can be erected with the minimum of skilled manpower. Among units shown recently in London were a hospital for 36 patients but capable of expansion, an operating theatre and radiography unit, and clinics and hygiene centres for rural districts.

The Shipwrecked Fishermen and Mariners' Royal Benevolent Society, which lately celebrated its centenary, was founded by John Rye, a philanthropic medical man of Bath, and C. C. Jones, an ex-pilot of Bristol. A feature of this society is that it obtains its funds not only from charitable donations and subscriptions, but also from contributions by seamen themselves.

In accidents other than those on the roads and in industry 8,000 people lose their lives annually, and in a recent analysis of 1,153 of these over half were due to falls, but only a small proportion to falls in the black-out. Nearly one-fifth were due to burns (30% in children) and scalds (80% in children) and one-tenth to drowning. The Royal Society for the Prevention of Accidents prepared this analysis.

Examination of the weight of Paris school children for the school year 1941–2 has shown that an average of 15 to 20% of the children have undergone a loss of weight or no change, whereas in normal times this occurs in less than 1%. The average increase in weight was also distinctly less than in the years before 1939.

Letters, Notes, and Answers

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QUERIES AND ANSWERS

Dressing for Cancer of Breast

Mr. WALTER PHILLIPS, F.R.C.S., writes: In reply to "Deodar" (Nov. 28, p. 654), in my experience the following method has given satisfaction for inoperable fungating carcinomas. Prepare a solution of 10% formaldehyde in water—about 1/3 of the official liquor. Cut a pad of two or three layers of lint to fit the ulcer. Smear zinc ointment over the surrounding skin for protection against caustic action of formalin. Soak the pad in the formalin solution and apply to the ulcer, tucking in the edges so as to avoid overlapping skin margins. Cover pad with a slightly larger piece of jaconet or other waterproof material, cotton-wool, and bandage. Retain in position for 24 to 48 hours. It may be necessary to give a sedative if pain results. A dry necrosis of the fungating mass is produced with resulting cessation of discharge. This horny material may be painlessly pared away with a scalpel until blood appears. The formalin may then be reapplied until the skin shows signs of reaction. Any dry dressing may be used after. The whole process can be repeated in three weeks to a month as necessary. The economy in dressings is remarkable.

Radium and Radon Burns

Dr. IRWIN MOORE (30A, Wimpole Street, Cavendish Square, W.1) asks that anyone who has had practical experience of the after-effects and treatment of serious radium or radon burns in the gynaecological and rectal regions will communicate immediately with him.

Income Tax

Payment of Bank Interest

"Z. X." left his private practice at the outbreak of war and has worked under the E.M.S. ever since. How can he now obtain relief for the bank interest he continues to pay?

*** As he is not carrying on a practice he cannot regard the bank interest as a professional expense, but he is entitled to an allowance, either by set-off from the tax now assessed under Schedule E or by way of repayment. He should obtain a certificate from his bank showing what interest he has paid for the period from the ending date of his last professional account to April 5, 1942—distinguishing between the financial years concerned—and forward it to the inspector of taxes asking him to arrange for the appropriate repayment or set-off.

Remittances by Officer Abroad

"CAPTAIN" is a British officer serving in India. He is paid £200 a year as a director of an English company, which is taxed at 10s. in the £, less the 10% for earned income relief. He remits £32 10s. a month to his wife in the United Kingdom.

*** Assuming that the remittances are made from earned income, and not from dividends, etc., from foreign investments or property, the amount is *not* liable to income tax in this country. As regards the £200 from the directorship the position is a little complicated; he is entitled to such an adjustment as will leave him in the position of having paid United Kingdom income tax in the proportion which his total real income bears to his United Kingdom income. For example, if his pay, etc. (not liable to income tax here), is, say, £600, and the amount of tax which would be payable here on an earned income of (£200+£600=) £800 is £*x*, then the tax ultimately payable will be 200/600 of £*x*. A claim to adjustment should be made to the Board of Inland Revenue, Somerset House, London, W.C.2. Any capital brought home after the war in so far as it results from savings of earned income will not be liable to United Kingdom tax.

Absentee Practitioner—Earned Income

"CAPT., R.A.M.C.," is an absentee practitioner whose practice is being carried on under the Protection of Practices Scheme. His half-share has been assessed as unearned income.

*** As we understand the position such income is regarded as accruing from the continued exercise of the taxpayer's profession, and as such we consider it should be assessed as earned income, even if the practitioner is not able to show that he has assisted occasionally in the conduct of the practice during the financial year in question. If the local inspector of taxes will not agree to amend the assessment we suggest that our correspondent should put the facts in writing to the Chief Inspector of Taxes, Imperial Hotel, Llandudno, N. Wales.

Appointment : Motor-car Expenses

"P. Q. R." points out that retired medical men who take up work—e.g., on medical boards, the emoluments of which are charged under Schedule E—are at a disadvantage in that they are not allowed to deduct the expense incurred in keeping a car to travel to and from the place where their work is done.

*** This is so. The rule relating to Schedule E as interpreted in the courts prevents the deduction of the cost of travelling from the place of residence to the place where the work is done, the grounds of the judicial decision being that such expenses are not incurred "*in* carrying out the duties of the office."

Reduction in Earned Income

C. J. M. points out that the operation of the previous year's basis of assessment where, owing to some change in circumstances, the income has declined, involves the taxpayer either in unfair taxation or in the trouble, and probably the expense, of producing accounts and claiming an adjustment.

*** We agree that the "relief" from the operation of the previous year's basis when the income falls by 20% does involve some trouble, but it is only natural that the Revenue should require evidence that the relief is due. If the practitioner returns to his practice after the war, he stands to gain by the way in which the previous year's basis will work and, unlike himself, the Revenue has no right to claim a departure from it.

LETTERS, NOTES, ETC.

Recurrent Chicken-pox?

Mr. FRANK MANNINGTON (London, N.10) writes: On Oct. 21 last I saw a child, aged 7, with a typical but mild attack of chicken-pox. This followed a normal course and the child returned to school at the end of three weeks. On Nov. 25 I was again called to see her and found her suffering with a severe attack of chicken-pox, which again is following a normal course. During over 40 years of practice I have never before seen a recurrent attack of chicken-pox. Perhaps it is worth putting on record.

Health of the Medical Student

Dr. B. H. SHAW (St. Mawes) writes: I have read Dr. Hope Gosse's article (Nov. 14, p. 567) on the health of the doctor. May I suggest that attention should be given to the health of our medical students at the present time. The diet of students in college is carefully attended to and adequate, but the majority of those who are "taking out" hospitals are away from home and left to the mercies of landladies, no extras are allowed, and young, growing, hard-working adolescents have exactly the same rations as old people. It is obvious that the strain and mental tension involved at the present time in intensive application are very considerably greater than in peacetime, as the standard of the examinations must be maintained and apprehension of failure to sensitive natures under the present circumstances is a most serious matter. There is no excuse whatever for failure to see that the nutrition of these young people, compelled to undergo such severe conditions, should not be at least as good as that of other adolescents engaged in work of national importance. If it is to be understood that medical students, being in a reserved occupation, are so engaged, it is manifestly the duty of the authorities concerned to see that adequate food for their needs is provided, especially proteins, and not just enough to keep body and soul alive. When breakdowns occur a very heavy responsibility is incurred.

A "Medical Protection" Jubilee

It is just 50 years since the London and Counties Medical Protection Society came into existence. At the end of its first year it had 200 members, compared with the 18,000 it has now. Its first annual report, with the subheading "A Year's Work among the Black Sheep," is an amusing and even flippant document. In 1892 there were "specialists in corpulency," charlatans whose practice it was to circularize fashionable dressmakers in the hope that the latter would bring their slimming cures to the notice of clients. The report also mentions a man who—in the hard-headed Midlands too, not in the gullible South—succeeded in passing himself off as a doctor on the sole ground of the possession of a high gig and a smart footman. Medical practice changes, and with the change come new pitfalls. When the Society began its work there were no complaints over such matters as burns arising out of electrical treatment or failure to make an *x*-ray examination in a suspected fracture. Indeed, some of the earliest cases it had to defend turned on the point that the practitioner had done too much rather than too little. It is remarkable that in its 50 years the Society has had only four Presidents—Sir Jonathan Hutchinson, Dr. G. A. Heron, Sir John Rose Bradford, and now Sir Cuthbert Wallace, who was re-elected to that office at the annual meeting the other day. During the past year it has had to deal with 886 applications for advice and assistance. The idea has arisen in some quarters that a doctor in an official position or in the Services does not require protection, but only recently the Society has been concerned to defend practitioners in the employment of local authorities and officers tried by court martial. The Treasurer, Mr. W. M. Mollison, reports a prosperous state of affairs, with over £85,000 accumulated funds. Originally the Society was responsible only for the payment of a member's own costs in proceedings, and in the event of an adverse verdict the member had to pay any costs or damages on the other side, but since 1924 it has given an unlimited indemnity.

Diet and Queening

Queen bees and workers are produced from identical larvae, and it is possible to rear queens from any female larva less than 3 days old by providing it with the appropriate food. On the chessboard a pawn has to plod dangerously to the eighth square to become a queen; but among bees royalty is a gastronomic affair. During the first two days after hatching, royal jelly, which is a secretion of the pharyngeal glands of the workers, is given to all female larvae. On the third day the diet of the larvae destined to become workers is abruptly changed, while the larvae destined for the throne continue to receive royal jelly. Heyl (*Science*, 1939, **89**, 540), it may be remembered, demonstrated the gonadotrophic activity of royal jelly on the ovaries of the immature rat. The jelly has been analysed by various workers, and at one time it was thought that the magical property resided in vitamin E. P. B. Pearson and C. J. Burgin (*Proc. Soc. exp. Biol.*, N.Y., 1941, **48**, 415) have recently come to the conclusion that the only vitamin in which royal jelly is unusually rich is pantothenic acid. It is, in fact, the richest known source of this member of the vitamin B_2 complex, but it has yet to be proved that it is pantothenic acid which will turn a possible worker into an actual queen.

Soluseptasine in Rheumatoid Arthritis

Dr. BERNARD F. SHEA (Sligo) writes: I have treated many cases of early rheumatoid arthritis with injections of soluseptasine, and the results have been so satisfactory that I think a more extended trial is worthy of consideration. My first case was in a married woman of 24 who had swollen ankles and great pain and limitation of movement in her knees, elbows, and shoulders. She had also typical swelling of the joints of the fingers. She had been in this state for three years and could walk only with great difficulty. I gave her 12 injections of 10 c.cm. of 10% soluseptasine intramuscularly daily, and improvement set in immediately. She is now, 2 years afterwards, quite well. I have treated many more cases with like results, and even chronic cases improve with these injections. I have sometimes given 18 injections to a severe case and have never found any toxic reactions in a series of 50 cases.

Rationed Distribution of Doctors?

Dr. DUNCAN LEYS writes with reference to his letter published on Dec. 12 (p. 708): I am reminded that the public health and medical staff of Inverness and its environs (with a population which I estimated at 30,000) also serve the county of Inverness with a further 55,000 people, so that the present staff is less, not more, than my estimated number required for basic essential wartime needs in a rationalized medical service.

Unreliable Vaginal Pessaries

Dr. MARIE C. STOPES writes: May I support emphatically the letter you publish from Dr. Lilias M. Blackett Jeffries (Dec. 12, p. 714) saying that quinine pessaries are widely advertised and the public "has complete confidence in them" though they lead to many undesired pregnancies. The misplaced confidence of the public is partly created by members of the medical profession who unfortunately advise their use, but even more by Press advertising. Since the foundation of the first birth control clinic we have done everything possible to spread the truth—namely, that *no* medicated pessary is, or can be, 100% safe by itself.